

people to know

HEAD IN THE CLOUDS

A Milwaukee engineer learns the ins and outs of flying planes, as well as building one.

IT DIDN'T take Dick Kaehler long to develop a flying habit.

One day, roughly a decade ago, his wife, Suzanne, surprised him with a helicopter flying lesson “after seeing me wistfully looking at the sky.”

After that, he was hooked. Two weeks after his lesson, he signed up to take another, this time in a fixed-wing aircraft (the plane lessons were less expensive and much closer to home than helicopter lessons).

“The die was cast,” recalls Kaehler, a vice president and principal with Computerized Structural Design, S.C. (CSD) in Milwaukee. “There was no turning back.”

First Flight

Kaehler's first lesson was in a Cessna 152, a two-seat, single-propeller plane that can fly as fast as 126 mph (or 110 knots) and has a wingspan of 33 ft, 4 in., a length of 24 ft, 1 in. and a weight of just over a half-ton. He explains that you get a lot of hands-on experience right off the bat.

“Even in the first lesson, you get to actually fly the plane,” he says. “They take off and land but you get to take the controls for a bit and get a sense of turning and a feel for the plane.”

Of course, landing is the biggest challenge, “especially in a high crosswind,” but Kaehler notes that he's never had what he calls a harrowing flight—mostly because he simply won't fly in dangerous conditions. To date, he's logged 250 hours of flight time and holds a private pilot license for a one-engine, fixed-wing plane as well as instrument privileges (meaning he's able to fly in inclement weather with instructions from air traffic control). His longest flight as a pilot has been between Milwaukee and Minneapolis.

Speaking of long flights, Kaehler has been with CSD for 31 years. It was his first job out of college (“I started there as an intern before there was such a thing”). An architecture major

as an undergraduate, he found himself being more attracted to the technical side of things and went on to earn a Master's Degree in civil engineering (his undergrad and grad studies were both at the University of Wisconsin – Milwaukee). He is currently chairman of AISC's Task Committee 2 – Editorial and a member of Task Committees 4 – Member Design and 10 – Stability and the Ad Hoc AISC and AISI Committee on Terminology; he's a member of both the AISC and AISI Committees on Specifications as well.

Piece by Piece

The combination of Kaehler's engineering experience and love of aviation led to a new project for him and Suzanne: building their own airplane. The plane is a “kit” similar to a Cessna 172, though more spacious and faster.

“Some say that being an engineer is the worst profession for someone who wants to build their own plane because you constantly want to make the design better,” he laughs.

But it's actually a benefit as well, he admits, noting that an understanding of structural systems and how things come together certainly come in handy. While some of the instructions are clearly very specific, others aren't so much.

“The instructions for the engine are a half-page,” he says. “Basically, they say, ‘Install engine and propeller.’”

And having some technical experience helps too when it comes to knowing when it's acceptable to substitute parts or where to place rivets (plus he was able to design his own instrument panel). The Federal Aviation Administration (FAA) requires that the builder do 51% of the work in order to certify the plane as “experimental amateur-built,” and Kaehler assembled his plane, a blend of some elements he fabricated himself and some pre-made components, in an outbuilding on his property.

Unfortunately, Kaehler's FAA health status changed a couple of years ago and after four years of working on the plane, he had to bring the project to a halt at about three quarters of the way to completion; he has no plans to start it up again. Still, he feels it was worthwhile and while he won't be flying a plane of his own making, he is far from grounded. He still flies a smaller light-sport aircraft weekly when he can and looks forward to the AirVenture air show in Oshkosh, Wisc., every year. (The country's largest air show, it takes place at Wittman Regional Airport, whose air control tower becomes the busiest in the world for one week every summer.) And in the end, being in the cockpit as opposed to the hangar is what it's all about.

“Flying gives you a different perspective on the world,” he says. “When you're flying the plane yourself, you see things you've never seen before. It's much different than being a passenger in an airliner.”

“The best part about it is that you can go where you want to go, not where the road takes you.”



▲ Kaehler and a Flight Design CTLS.

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