

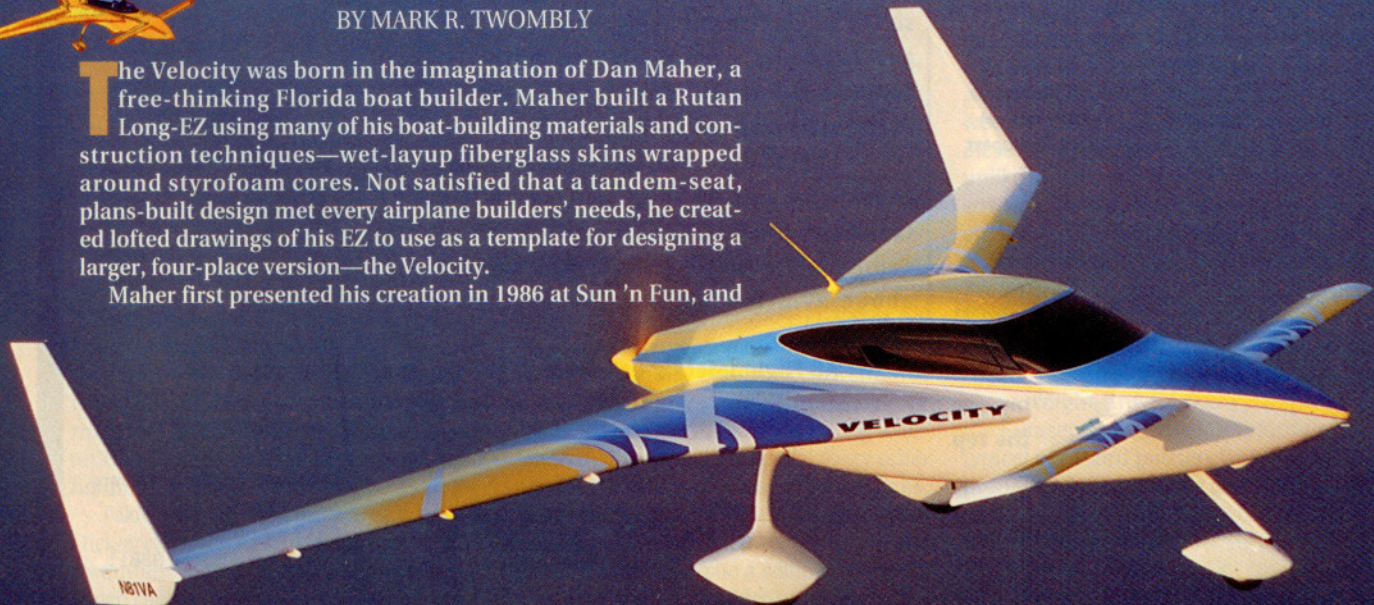
BIGGER CAN BE BETTER

Speed and luxury all in one

BY MARK R. TWOMBLY

The Velocity was born in the imagination of Dan Maher, a free-thinking Florida boat builder. Maher built a Rutan Long-EZ using many of his boat-building materials and construction techniques—wet-layup fiberglass skins wrapped around styrofoam cores. Not satisfied that a tandem-seat, plans-built design met every airplane builders' needs, he created lofted drawings of his EZ to use as a template for designing a larger, four-place version—the Velocity.

Maher first presented his creation in 1986 at Sun 'n Fun, and



VELOCITY PHOTOGRAPHY BY WINSTON LUZIER



it created a stir. The new design was notable not so much for its velocity as its felicity. It looked very cool. With its tadpole body, stylish windows, and unconventional aerodynamic configuration, it appeared to be a successful cross-pollenization of a late-1940s Hudson Hornet and a George Lucas space-movie speedster.

Nouveau appearance notwithstanding, the most appealing feature of the airplane is its interior. Those swept, dark-tinted windows admit subdued light into a classy, European-car-like cabin. The feeling is altogether different from a production aircraft.

Typical empty weight of a Velocity Model 173, the latest and most popular version to be offered, is 1,275 to 1,300 pounds. Gross weight is 2,400 pounds. Two 30-gallon wing tanks supply a 6-gallon header tank, which feeds the engine. Thus there are no Left or Right fuel selector positions.

Taxiing is a little different because of the castering nose-wheel and an unusual braking system: You push on a rudder pedal to deflect the corresponding rudder, then push harder to brake.

In climb and cruise the Velocity performs well. With two aboard the company's 173 fixed-gear demonstrator and about 35 gallons of fuel, we climbed out at 1,000 to 1,200 fpm at 110 KIAS. Though originally designed for 180 hp, a 200-hp Lycoming now appears to be the standard. A cruise check at 6,500 feet msl yielded 150 KIAS at 2,650 rpm and 10.5 gph. Count on about 15 knots more if the gear retracts.

The airplane is surprisingly

The roomy interior provides lots of space for an uncluttered panel. This is a different aircraft than the one flown, but is typical.

stable in pitch and roll, and is best flown with thumb and forefinger. Electric pitch trim moves a spring that biases the stick. The wingtip-mounted rudders deflect outward only, but it seems to make no difference in yaw control. In fact, the airplane will make coordinated turns without the use of rudders.

Landings are the biggest challenge. Deploying the electrically actuated speed brake, a flap on the airplane's belly, is the only effective way to slow the Velocity down. Approach speeds are relatively high—we used 100 knots on downwind, 90 on base, 80 on final, and looked for 70 at touchdown—and the attitude is increasingly nose high as speed decays. Full-stall landings are not recommended because the nose will plunk down first—

and hard. Precise speed control is the name of the Velocity's landing game.

The Velocity has gone through some maturation. The additional weight in the rear, plus variations in building technique, led to a serious problem. It was discovered that the airplane could enter an unrecoverable flat-attitude descent following a deep stall. The problem was solved by increasing the wing chord and moving the aft center of gravity limit forward three-quarters of an inch. Also, the aft fuel baffle was moved forward two inches. The changes are incorporated in the Model 173.

The changes made for a heavier, slower Velocity, with 65 gallons of fuel capacity instead of the original 73, but it is now a more docile and thus safer airplane.

Also, Maher has sold the company to Duane and Scott Swing, a father and son team that built two Velocities and in the process designed a gear retraction mechanism that has become popular with builders.

The Swings are in full swing at Velocity's Sebastian, Florida, factory. At the time of our visit last spring more than 200 Velocity kits had been sold and some 40 builder airplanes were flying. Kits are priced at \$21,000 for a standard fixed-gear model and \$22,000 for the 173; add \$4,000 for the retractable gear option. You can buy everything it takes to build a complete airplane, including engine, interior, instruments, and prop, for about \$42,500 for the fixed-gear standard version or approximately \$47,500 for a retractable 173. □

Velocity
200 West Airport Drive
Sebastian, Florida 32958
407/589-1860

