



# BREEZER

*The Breezer starts a new tradition for an*

# L

ike American ultralights, European microlights have paved the way to a new breed of aircraft for European fliers. Residents of the European community don't have the sport pilot/light-sport aircraft (SP/LSA) rule, but they know how to build the planes that serve the market.

Comco-Ikarus is one of Germany's most established microlight builders. After a long and successful run with its C22 and C42 airplanes, the company, based in Hohentengen in southwest Germany, is ready to run in LSA circles with its new Breezer.

*Text by Dan Johnson  
Photos by Jim Koepnick*



# IGALONIG

*established German aircraft manufacturer*

Compared to the C22 and C42, which is still being sold in Germany and the United States, the Breezer is clearly an original design. The Breezer has a metal wing and tail, whereas the C42

## SPECIFICATIONS

*(Note: All specifications and performance figures provided by factory. Figures are unverified except as otherwise stated in article.)*

### Dimensions

**Wingspan**—28.5 feet  
**Wing area**—127 square feet  
**Length**—21 feet  
**Height**—6.9 feet  
**Seating**—2 side-by-side  
**Cabin width**—46 inches  
**Empty weight**—704 pounds  
**Gross weight**—1,320 pounds  
**Fuel (all)**—18.5 gallons  
**Wing loading**—10.4 pounds/square foot  
**Power loading**—13.2 pounds/hp  
**Powerplant**—Rotax 912 UL2/ULS2  
**Power output**—80-100 hp  
**Propeller**—two- or three-blade  
Neuform  
**Baggage area**—aft of seats

### Performance

**Never exceed speed (V<sub>NE</sub>)**—133 knots/153 mph  
**Maximum level speed**—120 knots/138 mph  
**Cruise speed (75 percent)**—109 knots/125 mph  
**Stall speed**—36 knots/41 mph  
**Max rate of climb**—1,100 fpm  
**Takeoff distance**—440 feet (80 hp)/310 feet (100 hp)  
**Landing distance**—455 feet  
**Cruise duration (economical)**—4.5 hours (no reserve)  
**Cruise range (economical)**—575 statute miles (no reserve)  
**Fuel consumption (economical)**—about 4.0 gph

### Contact

**Sportsplanes.com**  
2059 E. Bear Ridge CV  
Draper, UT 84020  
Phone: 801/420-6176  
E-mail: [info@sportsplanes.com](mailto:info@sportsplanes.com)  
Website: [www.sportsplanes.com](http://www.sportsplanes.com)

has a fiberglass fuselage and its wings are constructed of aluminum tubes and covered with an advanced sewn textile called GT-Foil, a Kevlar-based material. The Breezer is a low-wing airplane, whereas the C42 is a high-wing; the C42 is strut-braced, while the Breezer is cantilevered. The differences go on and on. Ralph Magnuson is the designer of the Breezer, and Comco-Ikarus secured the manufacturing and marketing rights from him.

For Comco-Ikarus and its Breezer, this is a new game; for Americans, this is a new and interesting design available to us, along with the C42, through Sportsplanes.com.



The Breezer's panel is segregated with flight instruments on the left and engine instruments on the right, as is typical on most aircraft. Note the sight fuel gauge in the center alongside the radio stack, the center-mounted dual sticks with push-to-talk switches, and the dual throttles mounted on each side.

### A New Game

Comco-Ikarus started in business producing hang gliders and then evolved, like many American manufacturers, into building light aircraft. It claims a third of all fixed-wing airplane sales in Germany.

To general aviation pilots, the C42 seems more ultralight-like than the metal and carbon fiber aircraft currently dominating the LSA field. The Breezer brings a contemporary LSA look and personality.

Comco-Ikarus continues to build the C42 in its original factory, but because the processes are not similar and the production needs are different, the Breezer is assembled by Grilz in Kamenz, Germany. Sportsplanes.com, the United States distributor, became

involved with Comco-Ikarus through Simon Du Boulay, a United Kingdom-based agent for the German company.

### The Breezer's Construction

The Breezer's lower fuselage and wings are aluminum while its engine cowling, the upper part of its fuselage, and its wingtips are fiberglass. A steerable nose wheel is the business end of a thick fiberglass undercarriage.

Like most European LSA, the Breezer is powered by the four-cylinder, four-stroke, liquid-cooled Rotax 912UL engine producing 80 hp. The fire-forward package includes a standard Rotax electrical starter, electronic dual

ignition, stainless steel exhaust system with integrated cabin heat, integrated reduction gearbox, and carburetor pre-heating. (The 100-hp Rotax 912ULS is an option.) Other standard equipment includes a Neuform ground-adjustable, two-blade, carbon-fiber propeller with a fiberglass spinner.

The Breezer looks like many other low-wing airplanes, but it is an original design. This becomes apparent when you prepare to enter the cockpit. Instead of the familiar low-wing trailing-edge entry point, you enter from the front of the wing. A step helps you clamber over the leading edge. I liked it. The plane doesn't tilt aft and the



The wide-stance landing gear on the Breezer is constructed of fiberglass. The nose wheel is steerable and is cushioned with an oleo strut. The step for entering the aircraft from the front of the wing is obvious in this photo.

windscreen is a handy support. With an aft-sliding canopy, the design made sense right away.

You climb into the cockpit by stepping onto the wing, then onto the seats, and sliding into position. Like other designs, Breezer has dual joysticks, but unlike most designs it offers dual *outside* throttles. Though they lack an armrest, this is a handy feature for each pilot to control the power.

It was my pleasure to fly with Sportsplanes.com representative Dale Faux. Dale is quite tall (6 feet 4 inches), yet his knees didn't touch the panel and were actually somewhat aft of the panel. Despite his large stature and my average build, we had a little space between our shoulders, proving that even larger pilots should fit easily in this 46-inch-wide cabin.

The instrument panel in our test Breezer had conventional gauges with airspeed indicator (ASI), rate of climb, tachometer, artificial horizon, a gyro compass, and a sensitive altimeter in front of the pilot. On the right side were engine instruments for oil temperature, water temperature, cylinder head temperature, and a recording tachometer. In the center was a compact round radio stack with a row of switches mounted underneath. The magneto switches were under a plastic guard to prevent inadvertent shut-off. The engine key switch and a row of fuses were mounted at the lower edge of the main center panel.

Below the radio stack in a T-panel was a starter button, prominently mounted just under a 12-volt outlet for a GPS or other chargeable device. Under that were controls for the choke and cabin heat plus a trim knob. The latter was not as intuitive as Cessna's trim wheel, but it benefited from a clear instructional graphic. Simon stated that on future aircraft the trim control knob will be replaced by a stick-mounted trim.

A hand brake will also be mounted on the joystick, he said. Because the Breezer uses hydraulic brakes, hand levers afford sufficient authority. The Breezer I flew had a centrally mounted



The 80-hp Rotax 912 engine is the standard powerplant for the Breezer, with the 100-hp 912S an option. With room to spare in the engine compartment, engine overheating was not a problem.

hand brake with a parking feature. A stainless steel flap lever with a button-end detent, positioned between the seats, deployed the flaps to a choice of four settings.

A clear-tube fuel sight gauge was mounted behind a slot in the panel, making it easily seen yet subtly hidden. The levels of fuel remaining are labeled on the panel. On this early Breezer, the fuel quantity appeared in liters, but that will be changed to gallons on aircraft shipped to the United States.

The Breezer's sliding canopy had a single latch at the front using over-center leverage to assure it stays securely closed. We left it ajar for ventilation as we taxied out for takeoff. A sliding canopy allows the pilot and passenger to enjoy this advantage over a forward tilting canopy on a warm day. The seat belt fittings weren't standard

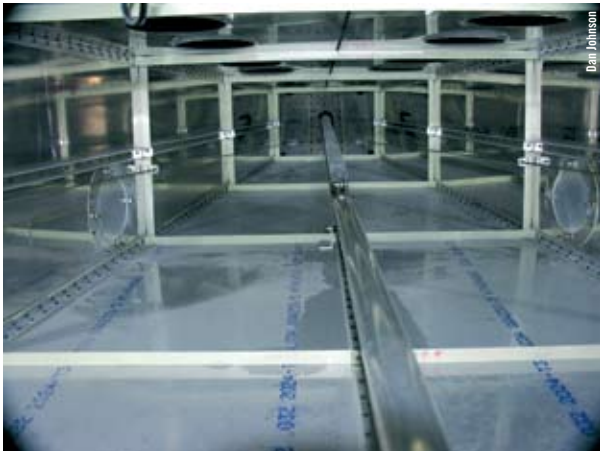
The Breezer is stable and quite solid feeling, a joy to fly.

American hardware; occupants should take a moment to become familiar with buckling and unbuckling the clasp before takeoff.

Aft visibility was exceptionally good in the Breezer. You can see the rudder by turning backward slightly. By turning more fully you can check traffic over a wide area above the fuselage. Forward visibility was also good, but naturally, the low wing prevents straight down viewing.

Most of the traffic had left EAA AirVenture Oshkosh 2005 by the time we taxied out, so our trip to the runway was mercifully short. On that quick taxi jaunt, I found the Breezer to be straightforward in ground handling even without differential braking.

On takeoff, I eased the throttle in smoothly while Dale observed my technique with the watchful eye of a parent letting his teenage son drive the family car on the freeway for the first time. It proved such an easy machine to launch that his concern soon melted away on a gorgeous Wisconsin summer day.



A look inside the aft fuselage of the Breezer highlights the all-metal construction of the lower half of the fuselage.

### So Cooperative

To escape the still-departing traffic at the end of the air show, we hopped over to the Fond du Lac airport to do a few touch-and-goes. I have not flown an airplane more cooperative about landing in a long time. The Breezer has the potential to make most landings look good. As such it may make an excellent trainer, especially given its good low-speed flight characteristics.

We lowered some flaps after slowing in the pattern and added another notch on base leg. The flap lever was handy, and the flaps were easily deployed. The high end of the airspeed indicator is clearly marked with a maximum 58-knot flap deployment speed.

The Breezer's slow speed characteristics were impressive. When we maximized the exercise at a safe altitude, the airspeed indicator read zero. Obviously, this represents a functional error, but I could sense the slow movement through wind noise. You need a little more rudder to enter turns at slow speeds, but the controls remain admirably effective.

Overall, the Breezer was controlled mostly with the joystick; little rudder pedal input was needed to make coordinated turns. Keeping the slip/skid ball centered was easy. These qualities should further endear the Breezer to student pilots.

This particular Breezer had a right-turning tendency, which Dale attempted to remedy by moving the fixed tab slightly. His effort reduced the uncommanded turn rate, which was already modest. This problem will be cured on production Breezers, I'm sure.

I found pitch a little sensitive on this Breezer. Were that not so, I'd say this was one of the best instructional aircraft I've flown. The trim knob was definitely too sensitive. It lacked the fineness of control needed for trim adjustment, but Simon said Comco-Ikarus has already changed the trim system to the same version used in the C42. He added, "It is nice to know that Ikarus is listening to feedback from its

**EAA's Sport Pilot Tour CONTINUES...**

EAA is continuing its inaugural Sport Pilot Tour, bringing EAA members—and the public—the information and tools they need to better understand and enjoy this new recreational-aviation opportunity. Tour highlights include sport pilot forums and educational opportunities for flight instructors—plus...light-sport aircraft manufacturer's displays and demonstrations. Come out and see us!

- Learn all about the exciting Sport Pilot Rule
- See and fly Sport Pilot eligible aircraft
- EAA's Sport Pilot team will provide insights into transitioning, maintenance, medical considerations, and more
- Learn what to ask before buying a Light Sport Aircraft
- Learn how to get more out of your EAA membership

**Coming soon to an airport near you!**

Visit [www.sportpilot.org](http://www.sportpilot.org) for updates.

For more information, call 800-JOIN EAA or visit [www.eaa.org](http://www.eaa.org) or [www.sportpilot.org](http://www.sportpilot.org).



customers at such an early stage in this LSA's development."

During maneuvers like the Dutch roll coordination exercise, I found the stick range was slightly limited by our legs and the aircraft's outside structure, though this will rarely be experienced in normal flying. Overall, the Breezer was stable and quite solid feeling, a joy to fly. I could detect no oil canning in its metal wing surfaces.

Like many LSA, the Breezer is genuinely lightweight (704 pounds empty), yet it can carry a load. With full fuel (18.5 gallons), the Breezer can haul two 215-pound occupants *plus* 75 pounds of luggage or gear. And, it can carry this payload for more than four hours and more than 500 statute miles.

### Running Fast

The Breezer's ASI green arc runs from 45 knots to 88 knots (101 mph); the yellow arc runs from 88 knots to 132 knots (152 mph), at which point you hit the redline. On one maximum



With its aluminum-tube fuselage structure with a composite shell and aluminum wings with a space-age fabric covering, Comco-Ikarus's C42 has a more ultralight-like appearance. More than 650 C42s have been built and sold worldwide since the aircraft was introduced. It is a distinctly different offering from Sportsplanes.com than the all-metal, low-wing Breezer.

power run at full throttle at a lower altitude, we saw about 5300 rpm with 117 knots (135 mph) showing in fairly calm and smooth conditions. Flying in the opposite direction at 5400 rpm (still in the green arc), we were at about 118 knots indicated. The yellow arc starts when you reach approximately 5500 rpm in level flight.

With power set at 5000 rpm, a number that Dale likes to use, we indicated about 105 knots (121 mph), though we were at only 2,500 feet AGL. Dale and I estimated this setting is slightly below 75-percent power. Dale reports that his

**SuperTite**  
The #1 Covering System for Light Sport Aircraft Owners

**SuperTite™** the perfect covering system for your LSA  
It's easy to apply - only 2 steps!  
You get an award-winning, high-gloss finish with little effort. It's chemical & heat stable  
Understanding is no problem!  
The finish retains its gloss and lasts over 10 years or more.  
Covering price for a standard light sport aircraft approximately \$1400-2600!  
Provides the quality fit and seeping 100% oil free bottom top.  
The **SECRET** advantage lies in additional 10% strength!  
Call SuperTite™ today for more information or to schedule a demo on your light sport aircraft.

**SuperTite™**  
2701 Highway 100  
Greenville, SC 29615  
Ph: 800-888-0071  
Ph: 810-826-8888  
Fax: 810-827-8813  
www.supertite.com



**KLEIN TOOLS**  
For Professionals... Since 1857®

Klein Tools has been making precision hand tools for nearly 160 years. Join the growing number of technicians and builders who demand the best.

Choose a Leader.  
Choose Klein Tools.

Ask your distributor about Klein Tools:

- Screwdrivers & Nut Drivers
- Wire Twisting Pliers
- Wrench and Socket Sets
- Precision Filers
- Adjustable Snips

[www.kleintools.com](http://www.kleintools.com)



average cruise speed across the United States while traveling to air shows has been 120 knots (138 mph).

During our high-power run at lower altitude, all the engine instruments read below green or in the lower green range, speaking well for engine compartment cooling. When throttling back for slow flight, I was amazed that at a 3500-rpm power setting we could nearly maintain altitude. (With a Rotax 912, 3500 rpm is quite low, perhaps 40 percent to 50 percent power.)

Steep turns to the right went well in that I was able to hold altitude at only 4000 rpm, which is a medium setting. The Breezer definitely did not need the added throttle over cruise power most general aviation (GA) planes seem to require to maintain altitude while banked at 45 to 60 degrees. Steep turns done to the left did require a slight addition of power.

It's always nice to explore stalls with a backup safety system on board, and our test Breezer was equipped with a ballistic parachute system, with the activating handle located on the far left lower lip of the instrument panel. Having worked for BRS parachutes for 18 years, I'm a believer in the lifesaving technology. So is Comco-Ikarus, which offered its own Flight Rescue System (FRS) at one time. But, the Breezer's stall didn't prove too exciting; it was a mild buffet that was easily identifiable. However, the aircraft wanders some-


what and also tends to drop a wing a bit suddenly, though it is easily recovered. Nose fall-through is mild. Like our slow flight experience, the speed at incipient stall was so low as to question the ASI reading. During cruise power stalls done at 4800 rpm, the stall got mushy but the nose didn't want to break over. The wing still dropped, falling to the left more often than to the right. Throughout all the stalls, steep turns, and fast runs, I heard no creaking in the airframe. Again, the Breezer's overall behavior reinforced the trainer capability of this speedy airplane.

### Write It Up?

Sportsplanes.com prices the Breezer on its website in euros as that's the currency used to pay Comco-Ikarus. That keeps things constant for the importer. Based on exchange rates at press time, the 80-hp Breezer listed at about

\$92,000, but given the volatility of currency rates it's best to discuss price directly with Sportsplanes.com or one of its Sport Aircraft Regional Centers (SARCs) when you are ready to order. Check out Sportsplanes.com website—[www.sportsplanes.com](http://www.sportsplanes.com) (and don't forget the "s" on the end of "sport")—to locate an SARC near you.

For the base price you get quite a finished aircraft. Standard equipment includes upholstery for the seats, cockpit, and luggage area made from quality textiles and a blue-tinted, lockable canopy with fresh air inlets on the left and right. Cabin heat is standard, as are hydraulic disk brakes with a parking feature plus elevator trim. Flight instruments include altimeter, ASI, compass, vertical speed indicator, and bank indicator. Engine instruments include a tachometer, oil pressure indicator, cylinder head temperature gauge, oil temperature gauge, and a sight fuel gauge. Creature comforts include a 12-volt outlet and luggage area behind the seats.

The Breezer may be a completely new aircraft, but it seems to have been done right. Little seems to be missing in the way of performance needs or creature comforts. And, it's manufactured by one of Germany's most successful light aircraft producers. The aircraft proved its good manners to me, but the only way for you to know if it's right for you is to take it for a flight. I suspect you'll have fun with this aircraft. 



**Comco-Ikarus continues to refine the Breezer to American tastes, following through on a list of minor improvements Dale Faux has suggested after six months of touring with the aircraft throughout the United States. Many of Dale's suggestions relate to flight training use, and Simon Du Boulay reports that Comco-Ikarus will implement those changes on all new Breezers delivered to the United States market.**