SLEEK

Sporty Sling

The light-sport Sling 2 is more than just a pretty face

BY BETH E. STANTON

PHOTOGRAPHY BY **DARIN LACRONE**

Sling designer Mike Blyth looks pleased after flying to Oshkosh from South Africa in the Sling 2.

Above: The well-designed cockpit of the Sling 2 set up for circumnavigation flight. The mic is attached to an HF radio. **Below:** Additional 40-gallon long-range ferry fuel tanks in the luggage area give the Sling 2 a 2,200 nm range.

WHAT DO YOU GET WHEN a guy with a background in architecture, design, engineering, and flight instruction who knows precisely what he wants in an airplane decides to just make one himself? Answer: The light-sport Sling 2.

Mike Blyth is a dreamer and a doer. "All my life I've been a designer," he said with a laugh. "I spend all my waking hours thinking about designing things." He had a vision to build the most practical and desirable light-sport aircraft available. In 2005, he founded The Airplane Factory to do exactly that. The head office and main factory of the international company is located in Johannesburg, South Africa, with an assembly plant in Taiwan and a distribution office in Los Angeles.

Mike's diverse background put him in a unique position to build a state-of-the-art, stylish airplane. He began studying architecture at university prior to switching to engineering. "Architecture gave me the ability to design the space and ergonomics as well as the look and feel of the aircraft. Engineering gave me the ability to build the structure properly." His background as an ultralight instructor and flight school owner provided valuable input during the Sling 2 design process. Mike explained, "I always intended it to be used in flight schools. I've taught many people to fly, and I understand training. I know exactly what the instructor needs, and I know what the student would like in an aircraft. To build something suitable for use in flight schools needs to be robust.

"I've flown many different types of aircraft, and I'm always concerned about structure and controllability. I made sure that the aircraft that students fly, and that I am going to be flying in with my family, is strong and safe." He also drew upon his experience designing and building a number of different ultralight aircraft while developing the Sling 2. "I got to know what flies well, handles well, and feels solid, so I designed all that in." He feels it's been a tremendous advantage as an aircraft designer to have thousands of hours of flight time under his belt and to fly the airplanes that he creates.

SWEET PLANE

The Sling 2 inhabits a sweet spot of performance, economy, and safety. Combined with some bells, whistles, and civilized creature comforts, it's also a blast to fly. Of course, no single plane will fill the needs of every pilot, but the Sling 2 has a list of qualities that most all pilots appreciate:

- **Handling:** The Sling 2 handles easily on the ground. Its flying characteristics make for coordinated, highly responsive controls (without being overly sensitive) and is very controllable at low speed.
- **Strong and solid:** The all-aluminum structure with fiberglass fairings and cowling is strong and durable and has a solid feel. (For kit builders an aluminum structure is preferred.) The whole aircraft, especially the landing gear, is very robust.
- **Aerodynamic:** Efficient sleek lines, tapered wings and tail.
- **Reliable Rotax engine:** Long-lasting, light, and fuel-efficient engine. A slow-turning prop through a gearbox allows for a quiet and efficient prop.
- **Comfort and convenience:** Wide cockpit with great visibility, excellent ergonomics, and substantial luggage capacity.

PHOTOGRAPHY BY **TYSON RININGER**

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SLING 2 LSA SPECS

General
Seats: 2
Engine: Rotax 912 ULS /iS
Horsepower: 100
Propeller make: Warp Drive
Propeller blades/diameter: 3/72 inch
Propeller operation: Ground adjustable
Primary avionics: Garmin G3 or MGL iEFIS
Secondary avionics: Analog backup instruments

Size
Overall length: 21 feet 10 inches
Height: 8 feet
Wingspan: 30 feet 1 inch
Wing area: 127.5 square feet
Cabin width: 43.8 inches

Weights
Maximum takeoff weight: 1,320 pounds
Standard equipped empty weight: 815 pounds
Useful load: 505 pounds
Luggage capacity: 77 pounds

Fuel
Fuel capacity: 39.6 U.S. gallons
Fuel consumption at cruise (912 iS): 4.75 gph
Fuel type: Mogas or avgas

Performance at Sea Level
Max allowable speed (V_{NE}): 135 KIAS/155 mph
Stall speed—clean: 44 KCAS/51 mph
Stall speed—full flaps: 39 KCAS/45 mph
Max demonstrated crosswind: 15 KCAS/17 mph
Takeoff ground roll—concrete: 550 feet
Landing distance—braked: 350 feet
Rate of climb, sea level: 900 fpm
Max operating altitude: 14,000 feet
Range at 75 percent 45-minute reserve (912 iS): 750 nm

- **Instrumentation:** Customizable options for unique, state-of-the-art flying.
- **Options to make it yours:** Engine, propeller, instruments, color, and ballistic parachute.

The Airplane Factory offers several different varieties of Sling aircraft. There are two versions of the Sling 2: a 1,320-pound LSA version, tested to ASTM standards, which may be purchased as a ready-to-fly aircraft or as a kit E-LSA. A taildragger version is also available. The experimental Sling 2 weighs in at 1,540 pounds, meets CS-VLA standards, and is offered as a kit, or quick-build kit, with the wings, fuselage, and tail partially built and the instrument panel and wiring done. The kit is composed of a stressed skin semi-monocoque structure with precision punched parts from sheet aluminum by CNC punch. The entire build is precise and simple to manage, even for beginners. The most popular seller at this time in the United States is the Sling 2 LSA.

FOR ADVENTURE

Mike has always had a long-distance flying bug. Back in the days when he was still building ultralights, he flew some epically long flights in trikes. In 1995, he flew from Cape Town to Norway over a four-month period. In 1999, he and his friend Olivier Aubert made a nine-month flight from the southern tip of South America up to Canada, across the North Atlantic to Greenland and Iceland, and down through Europe to Cape Town.

Mike met Dick Rutan and Jeana Yeager in 1987 after their spectacular nonstop circumnavigation flight when they went to South Africa to give a talk to the Aero Club. Later, when Dick Rutan and Mike Melvill flew around the world in their VariEzes they stopped off at his airfield. "I had a good chat with them and later read Dick Rutan's book *Voyager*," Mike said. "That was an inspiration for me to keep going with this flying-around-the-world thing."

The first production prototype Sling 2 flew "so incredibly" that Mike and his business partner James Pitman decided to fly it around the world. "I thought, here's the plane we can do it in now, really." In 2009, they flew westward around the world in 40 days. Mike had originally intended to first make a low-wing Sling 2 and then a high-wing version. After their flight around the world, he realized the tremendous carrying capacity of the Sling 2. He decided to next make a four-seater version, rather than another two-seater. The Sling 4 was born. In 2011, pilot Jean d'Assonville flew the first development prototype Sling 4 eastward around the world in 48 days. Mike and James each went halfway with him. After that circumnavigation, they were so pleased with the plane that they decided to fly to AirVenture 2013, returning to Johannesburg via Greenland, Iceland, England, Europe, and down the west coast of Africa.

AROUND THE WORLD TO AIRVENTURE 2015

The start of a big trip is always the difficult part. Sleep is nearly impossible the night before.—Mike Blyth

AirVenture 2015 seemed as good an excuse as any for another go around the world. The motivation this time was their new business partner, Patrick Huang. Mike joked, "All Airplane Factory shareholders must fly around the world at least once!" The team consisted of Patrick, who flew the entire circumnavigation west, with Mike, Jean, and James joining for one-third of the way apiece. Sling 2 ZU-TWN left South Africa on July 9, 2015. These ambitious trips are a combination of high spirits and monotony. Some days are smooth surfing with the trade winds on their tails; other days are spent dodging storms, clouds, and rain. The pilots must navigate not just their route, but paperwork and bureaucracy in multiple countries.

Layers of safety are built into these expeditions: autopilot, redundant communication systems, emergency survival equipment, and a ballistic parachute. Communication is composed of radios, satellite phone, and special IndigoSat trackers. "If you lose contact with Oceanic Control when you are in the middle of a big, cold, dark ocean, they tend to get all panicky and stuff. For us it's okay really because we know we have trackers with lots of eyes on the little dot on the screen, a satellite phone, ELT, PLB, HF radio, main VHF radio, and backup VHF." The IndigoSat satellite tracker connects them to their team and friends watching their progress and advising on weather. "We feel connected and know that someone will know where we are at all times especially if we start pressing the red buttons." Night flights get ticklish due to fatigue, especially when heading out across an ocean. "A takeoff over the sea at night is an interesting experience because one minute there are lots of lights around, and the next there is pitch blackness everywhere," Mike said. "The thing about flying at night over water is that if you have an emergency like an engine failure, it is much riskier to handle than if you are flying in the day where you can actually see the surface of the water. We decided that if we had an engine failure at night we would pull the parachute." Emergency water survival equipment consists of cold-water dry suits, two-man life raft, life jackets, flares, dye, smoke, handheld radio, PLB, tracker, first aid kit, and food and water for five days.

Compared to other airports around the world, the team agrees that flying in the United States is a breeze. Mike describes it like paradise. "There are thousands of wonderful airports with long, smooth runways and air-conditioned reception areas, fuel, a free courtesy car to use, helpful friendly people, and absolutely no bureaucracy at all." On July 19, 2015, ZU-TWN touched down on the orange dot on Runway 27 at Oshkosh. Their welcoming committee was 30 South African countrymen. After 10 days in the air, they did what any sensible pilots would do. They tied the plane down and went in search of beer.

WONDERFUL MODERN TRAVELING MACHINE

Mike believes the appeal behind flying a Sling across the globe is that it is a comfortable, well-designed airplane. Precise ergonomics make it easier to sit in the plane for hours on end. Mike has made sure that every aircraft he has ever designed is "really, really, really" comfortable to sit in for many hours. It's painstaking work, but it's worth it. "It takes a lot of hours, and you have to work at getting it right," he said. "You have to get the angle of the seat exactly right—the length, depth, width, and the shape—and then you have to get the armrests in the right place and soft enough, then the stick in the right place."

The dauntless Airplane Factory pilots have inspired others to adventure. "Quite a few chaps have done very long flights in their Slings," Mike said. "I think it's a result of them watching what we've done and thinking, 'This is something I can really do; I don't have to buy a hugely expensive aircraft to do this.'" The Sling 2 uses so little fuel, less than 5 gallons per hour, it's very economical to operate. "Since you're flying a light, small aircraft that is a bit slower, you can fly along lower and follow the valleys. It's kind of like pioneering. You can't do that easily with a larger, faster aircraft where you have to keep up high and fly in a straight line."

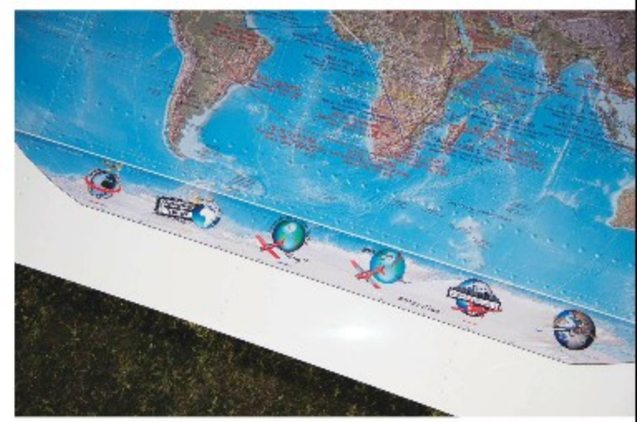
TRAVELER AND TRAINER

TV producer and director Craig Spirko had some pretty specific criteria when shopping for a plane: new, parachute, economical. For work, he travels between the East and West Coast of the United States. In his LSA Sling 2, it takes him two days. "It's not faster than the airlines but it's a lot more enjoyable." He appreciates that the plane is easy to land in heavy crosswinds and is not "twitchy" in pitch. He's having fun flying into small grass strips around the country. He likes that the plane is well thought out and easy to work on. He took a three-week light sport repairman class and can now work on the plane himself. "So annuals can be free, plus parts, and services of course." So far, Craig has landed his Sling in 35 states. "I'll probably make it to Alaska in the Sling, but unlike Mike, James, Jean, and Patrick I probably won't fly it to Hawaii."

The LSA Sling 2 doesn't just *fly* around the world, it's also used as a primary trainer around the world. About 40 LSA Slings are used in flight schools in five countries: South Africa, Namibia, New Zealand, Australia, and the United States. There are six flight schools in the United States exclusively operating the aircraft. Sport pilot Sam Nozik's favorite aspect of flying a Sling is how easy it is to fly. "I remember thinking after one of my first lessons, 'It can't possibly be this simple,' but it is." He also loves the glass cockpit and the fact that it is affordable. "The exterior is so beautifully designed, it feels like a plane that you want to be seen in. The handling is incredible; it's like a well-tuned sports car." When Tracy Eschenbrenner found out about the sport pilot certificate, it made his lifelong dream of flight achievable and affordable. He saw a Sling for sale online, and it was love at first sight. He bought the plane and learned to fly at the Sling Flying Club in Torrance, California. He earned his certificate in just eight weeks and 32 hours. He loves the looks, aerodynamics, instruments, feel, and controls. Tracy compared flying the Sling to "flying a sports car with tight and responsive controls and a canopy that slides back." With the eight-hour, 800-mile range, he plans to fly to Oshkosh this year. He flies several times a week and has already racked up 150 hours. His mission is to fly as much as possible. "So if you see a red and white low-wing plane that looks like a Ferrari flying around Fullerton, California, that's me." *EAA*

Beth E. Stanton is a competition aerobatic pilot and president of Northern California Chapter 38 of the International Aerobatic Club. She can be reached at *bethestanton@gmail.com*.

The Sling 2 is fitted with the efficient Rotax 912 iS engine. Final destination for this Sling 2 is Taiwan, hence the combined South African and Taiwanese flags.



Above: A world map on both wings depicts long-distance flights the Airplane Factory owners have undertaken. **Below:** Composite main gear adds to the Sling's robustness. A venturi drives the backup attitude indicator.

PHOTOGRAPH BY TYSON RININGER