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SUPER PETREL XP

WATER WINGS

FEISTY LITTLE SEAPLANES CLAIM A PLACE IN THE U.S. MARKET / **P.50**


Light Sport
SUPER PETREL XP
Light Sport
SUPER PETREL XP

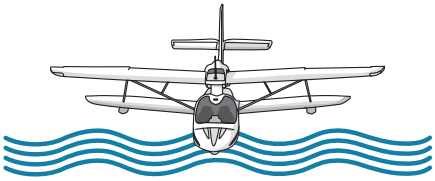
SMALL BUT MIGHTY

‘AS GOOD AS AVIATION GETS’

BY DAVE HIRSCHMAN | PHOTOGRAPHY BY CHRIS ROSE

The lightly rippled water passes below in a rush as the radar altimeter counts down the last five feet before touchdown.

"Five - four - three - two..."



Mark "Ziggy" Ziegler holds the Super Petrel one foot off the surface of the tea-colored Florida lake for several seconds before the carbon fiber hull skims the wave tops. Then he pulls the throttle lever to idle and lets the light sport amphibian settle into the fresh water.

"I've been lucky enough to fly some extraordinary aircraft during my military and airline careers," says Ziegler, who flew F/A–18 Hornets in the U.S. Navy's Blue Angels demonstration squadron. "But I've never had more fun in any airplane than the Super Petrel. It makes flying on and off the water feel effortless, and that's just so enjoyable."

Alligators and other obstructions

Ziegler teaches new Super Petrel owners the nuances of flying and caring for their Brazilian-made LSAs, and he assembles and test flies each two-seat aircraft when it arrives at the U.S. sales center in Ormond Beach, Florida.

About 55 Petrels have been imported to the United States since 2016, and the company has delivered more than 400 internationally. The latest, a Rotax 915-powered, 141-horsepower model known as the XP, is far and away the most capable.

The airplane is surprisingly simple mechanically. The biplane design with a pusher prop has no flaps, water rudders, or folding wings. The main landing gear is electro-hydraulic, and the main wheels retract into cutouts in the bottoms of the wings so there are no external hydraulic or brake lines at all.

The airplanes are designed by Rodrigo Scoda and built by Scoda Aeronáutica in Brazil. It takes Ziegler one full day to assemble a Super Petrel once it arrives in a shipping container at Ormond Beach Airport (OMN).

"The design philosophy is all about simplicity, strength, and reliability," Ziegler says. "The biplane design increases wing area and gives the Super Petrel a very low, 40-knot stall speed with a short span and no flaps. It also protects the prop from water spray during takeoffs and landings so there are lots of benefits."

After touching down on the water, Ziegler uses ailerons to keep the wings level as the hull settles into the water. Two tiny sponsons attached to the bottoms of the lower wings provide additional flotation.

The boom-mounted tail is directly behind the propeller and provides positive steering on the water even without water rudders.

Taking off is a relatively simple matter of pointing the nose into the wind and adding slight up elevator and full engine power. Acceleration is brisk; the ailerons are effective at keeping the wings level (and preventing the sponsons from dragging) well below the airplane's stall speed. Light back-pressure on the floor-mounted stick has the airplane flying in ground effect at just under 40 KIAS. The angle of attack warning chirps during our six-second water run into an estimated 10-knot breeze, then goes silent during a 10-degree climb at 70 KIAS.

This panel is equipped with more technology than seems possible for a 950-pound airframe. There's a Garmin G3X primary flight display/multifunction display, angle of attack indicator, G5 standby instrument, and a GHA 15 "height advisor" paired with the G3X that activates at 500 feet agl. The height advisor also gives timely aural alerts telling whether the tricycle landing gear is down for a land landing or up for a water landing.

Glassy water landings are especially hazardous because pilots can easily lose depth perception and misjudge their height above the surface and rate of descent. Seaplane pilots are taught to set their airplane's attitude and engine power, then use the vertical speed indicator to gradually lower the aircraft to the surface. It's a fraught maneuver because it requires the pilot to shift from flying visually to an instrument scan close to the surface. The GHA 15 is a $3,000 option that's likely to become standard equipment in the future.

"The rad-alt takes the guesswork out of glassy water landings," Ziegler says. "It's tremendously useful and accurate."

ANNIE ELLIS

Bill Gortney (lead) and Mark “Ziggy” Zeigler (wing) flew together in the U.S. Navy, and they’re still chasing each other in the air and on the water in amphibious Super Petrels. A Florida lake with a lightly rippled surface is ideal for these small flying boats.

A Garmin G3X PFD/MFD with engine gauges and G5 standby instrument provide exceptional situational awareness. The lower wing of the biplane design protects the five-blade, fixed-pitch, composite propeller from spray during water takeoffs and landings.

Small spaces

Initially, the Super Petrel's cabin/pod seems too tiny to carry both of us. I'm an FAA-standard-sized human at 5 feet 8 inches, but I've got personal space issues, and my demo pilot, Ziggy, is 6 feet 4 inches tall.

Stepping into the cockpit is a simple matter of stepping over the canopy rail, putting both feet on the seat, and then lowering yourself into the cockpit. The seat is simply a thin cushion that follows the contours of the fuselage floor, yet the semi-reclined position is quite comfortable. My feet rest easily on the rudder pedals, and I'm a bit mystified to find heel brakes on the floor. Didn't those go out of style in the disco era, or even earlier?

The metal pedals are connected to top-quality Beringer wheels and hydraulic brakes, and they work well but require ballerina-like ankle dexterity which I lack. Ziggy gives me a pass to use my toes on them.

"You'll only need them for run up," he says.

Ziggy gives me a choice of seats and I take the right. I much prefer having the stick in my right hand and throttle on the left, and many years as a CFI have me accustomed to the co-pilot side.

I connect the four-point seatbelt harness as Ziggy climbs in, and I'm astonished that we're not bumping shoulders. The pod is deceptively wide.

The rear-hinged canopy can stay open in winds up to 25 knots, and Ziggy keeps it open during engine start. The computerized 915 iS comes to life at the touch of a button, and the five-blade E-Prop whirs behind us. Ziggy brings the canopy down by hand to a taxi position that cleverly provides an inch-wide gap for ventilation.

Retractable landing gear tucks neatly into the Super Petrel fuselage with no exposed brake lines. Composite materials as well as high-end Beringer wheels and brakes are meant to resist corrosion.

Visibility is excellent on the ground, but you sure sit close to it.

Runup is standard for the liquid-cooled engine, and we're quickly cleared for takeoff on Runway 9. The airplane is loaded with 15 gallons of fuel, or half tanks, and no bags so we're well under the LSA amphibian weight limit of 1,430 pounds. The Super Petrel was designed and tested for a maximum gross weight of 1,500 pounds, and the company is hoping the proposed MOSAIC regulations will allow for that gross weight increase.

The turbocharged engine puts out a gobsmacking 45 inches of manifold pressure at full power, and it does so relatively quietly, smoothly, and without drama. Acceleration is instant, however, and we're airborne in about two runway stripes (400 feet) and climbing 1,200 feet per minute at the best-rate speed of 65 KIAS.

Gear retraction is confirmed by panel lights as well as visually by way of a mirror on each sponson.

We level off at 1,000 feet agl and head west to Lake Disston about 15 miles away.

Pitch and roll forces are light and well balanced, and pushrod elevator and aileron controls mean there's no slop. I estimate the full-deflection roll rate at about 35 degrees per second, or roughly equal to that of a Cessna 182 Skylane.

Slow flight and steep turns reveal modest adverse yaw. The bottom wing has a slightly higher angle of incidence than the top wing, so the bottom wing buffets lightly and stalls first, while it's difficult to get the top wing to stall at all. Idle power and full aft stick don't produce a clean stall break. The Super Petrel mushes and rocks gently fore and aft instead.

There's a 10-knot surface wind from the northeast as we pick out an area clear of alligators and other obstructions for water landings. The Super Petrel is approved for wave heights up to 10 inches—but with the seats resting atop the carbon fiber floor, even such relatively small waves would surely feel like a severe spanking. Luckily, the waves today are little more than ripples, and our water work is smooth and satisfying.

Confirm the landing gear is up, fly at 65 KIAS, carry some engine power into ground effect, and smoothly work the stick aft. Listen for the angle-of-attack aural chirps to get more rapid and insistent as the radar-altimeter counts down the final few feet.

Designers try to maximize the Super Petrel's limited interior space with clever storage areas. Headsets are stowed over the outside shoulder, and a hat shelf is within easy reach. Mark Zeigler (6 feet 4 inches tall) performs a preflight inspection. The 141-horsepower Rotax 915iS is the most powerful engine available on the Super Petrel.

SPEC SHEET

Super Petrel XP
Price as tested: $299,000

SPECIFICATIONS

Popwerplant / **Rotax 915 iS Turbo (141 hp)**
Propeller / **E-Props 5-blade (France)**
Length / **21 ft 0.96 in**
Height / **8 ft**
Wingspan / **29 ft 8.04 in**
Seats / **2**
Basic empty weight / **925 lb**
Max gross weight / **1,430 lb**
Fuel capacity / **28 gal usable**
Takeoff distance, ground / **249 ft**
Takeoff distance, water / **375 ft**
Rate of climb, sea level / **1,800 fpm**
Max cruise speed / **115 kt**
Landing distance, ground / **422 ft**
Landing distance, water / **351 ft**
V_{NE} (never exceed) / **120 KIAS**
V_S (stall) / **40 KIAS**

All specifications are based on manufacturer's calculations. All performance figures are based on standard day, standard atmosphere, sea level, gross weight conditions unless otherwise noted. Find more specifications in AOPA's Aircraft Guide.
▶ **aopa.org/aircraftguide**

View the video
aopa.org/pilot/july24

When the hull settles in, pull the power to idle and keep the wings level. Unlike traditional floatplanes that demand full aft stick at touchdown, the Super Petrel prefers only light up-elevator.

Super Petrel USA requires that buyers complete a factory training program that varies in length depending on pilot proficiency and insurance requirements. If buyers decline the course, their airplane warranty is void. The course includes avionics training, a review of owner-approved maintenance tasks, and a four-flight syllabus.

"It's all about interacting with the airplane," says Bill "Shortney" Gortney, a former U.S. Navy fighter pilot, admiral, and Super Petrel XP owner. "It's not just takeoffs and landings. We want people to have a great time with these airplanes, and that won't happen if they break them."

The training typically takes place at Ormond Beach or Lake Anna, Virginia. Super Petrel USA can send their instructors to customer locations but prefers that buyers come to them—having a captive audience ensures new Super Petrel pilots will have few distractions.

The company also offers a pilot and maintenance course each fall that lasts three days and covers best practices, lessons learned, and every mechanical task required for a yearly condition inspection.

'As good as aviation gets'

The Super Petrel was designed before the Icon A5 captured the imagination of the general aviation public or the Progressive Aerodyne SeaRey gained international investment.

Both of those two-seat, light sport amphibians were purchased by Chinese investors, and both face uncertain futures. Icon recently sought Chapter 11 bankruptcy court protection, and Progressive Aerodyne is said to have closed its doors when China cut funding.

Gortney says the financial travails of Super Petrel competitors don't help Scoda Aeronáutica.

"We'd like to have a thriving sector with healthy competition," he said. "That would be good for everyone. Until then, we'll focus on continuing to provide a great airplane with outstanding performance and superior fit and finish. And we'll train pilots to operate them well and safely wherever they want to fly.

"Owning and flying this airplane is a dream come true for me," he said. "Flying with friends on and off the water in such a capable airplane with this level of fit and finish is just as good as aviation gets." ■

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