

We Fly: Tecnam P2010

By Stephen Pope / Published: Oct 28, 2015

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The Tecnam P2010 is one of those airplanes that you can't help but stop to look at when you see it on the ramp. Mainly because you'll be wondering why that Cessna Skyhawk looks so good. Until you realize it's not a Skyhawk. It's something different. Something silky smooth. With flowing lines.

My goodness, it's sexy.

For a variety of reasons, the P2010 is also an important airplane. Notably, it's the first all-new high-wing, four-place single to be subjected to the rigors of Part 23 certification in the United States in 47 long years, since the introduction of another Cessna product, the 177 Cardinal (also sexy in its own way).

The **Tecnam**, as well, represents among the first of what is anticipated to be a new breed of light general aviation airplanes positioned to take advantage of construction techniques, technology innovations and certification standards that weren't envisioned in general aviation's bubble-hyped heyday in the 1960s and '70s, when the skies were dominated by all-metal-and-rivet airplanes outfitted with basic six-pack instrument panels, icing-prone carbureted engines, and groovy velour or vinyl seats.

The seats in the P2010, this new light-piston single from the brilliant mind of Italian aviation design scion Luigi "Gino" Pascale, are Italian leather. The fuselage, glassy carbon fiber. The instrument panel, gorgeous Garmin LCDs without a round dial in sight. Underneath the cowl, a four-cylinder Lycoming IO-360 – but there's room up there for something bigger.

Still, the P2010 from Costruzioni Aeronautiche Tecnam isn't without faults. For starters, the company name is a mouthful, requiring just the right Italian flourish to say it properly. The name is unfortunate for a couple of reasons, but we can clear up at least some of the confusion straight off. You can drop the "Costruzioni Aeronautiche" since here in the United States (and just about everywhere else outside of Capua, Italy), it's just Tecnam, shorthand for "technical manufacturer." Not exactly the sexiest name, especially for an Italian light airplane manufacturer, but give it a few years and I predict it will roll off the tongue effortlessly, like water burbling from the Trevi Fountain.

The company's aircraft naming conventions are also somewhat confusing. For instance, the Tecnam P2010 is smaller than the twin-engine Tecnam P2006, which is bigger than the P2004 but smaller than the P2012. What's more, in promotional materials Tecnam sometimes writes it as "P2010," and in other places (like emblazoned on the cowling) as "P Twenty-Ten" (no doubt to keep Italian speakers from calling it the "P Duemila-Dieci" – which, when you think about it, actually sounds kind of sexy).

The names correspond to the year that Pascale, the firm's chief aircraft designer since the late 1940s, first put pen to paper to create a particular model. So despite the P2010 being certified and going on sale in Europe in 2014 and probably in the United States in 2015 (Part 23 certification is expected soon), we have an airplane that sounds a few years older than it really should.

The market timing for the introduction of the P2010 is unlucky because the FAA is now hammering out totally new certification rules that are supposed to make it easier to bring a Part 23 light airplane like this one to U.S. shores. The rules should have been written by now, but the FAA is dragging its feet. So instead Tecnam is choosing to certify the airplane under the old rules – a rare path these days – and it's paying more money while incurring certification delays and being forced to make some irritating design compromises for the privilege.

This leads us to the price, which is wrong too, for good reasons and bad. At \$345,000 list, the P2010 is less expensive than a comparably equipped new Cessna Skyhawk, Piper Archer or Diamond DA40, its primary competitors. Still, would-be makers of next-generation four-seat singles, like the Flight Design C4 that will be certified under the revised Part 23 rules, are claiming their products will sell for considerably less. So while Tecnam might be running circles around "legacy" manufacturers on pricing right now, that advantage could be short-lived. After all, if buyers believe a \$250,000 Flight Design C4 is coming in a few years, will they really pay almost \$350,000 for a P2010 today?

I think I would, and here's why. There's no guarantee that the C4 will really sell for \$250,000 when all is said and done. Also, on paper the P2010 looks, if not like the better airplane, at least like a very good airplane. It's reasonably fast, can fly far, comes equipped with the latest Garmin G1000 avionics and can carry a decent load. Last but not least, the P2010 is a real product that you'll be able to go out and buy very soon in the United States, and the Flight Design C4, well, isn't.

Design Overview

It's nearly impossible to see a P2010 from a distance and not start making comparisons to the Cessna 172. It's what I did, but that was a mistake. Though they look alike, carry four people, are powered by 180 horsepower engines and come standard with comparable avionics packages, that's

where the similarities end. By just about every other measure (speed, range, useful load, cabin room, construction materials and more) the Tecnam easily outclasses the Skyhawk.

Really, the P2010 is closer in performance to the Cessna Skylane. Its slippery carbon-fiber fuselage and aluminum-alloy laminar flow wing cut through the air with greater efficiency than the riveted aluminum designs from Cessna could ever dream. In fact, I had some difficulty getting the P2010 to land as short as I wanted the first time I cut the power at pattern altitude and headed for the numbers. It wanted to keep flying, floating farther than I anticipated. A slip on final helped eat up the extra altitude, but I still sailed slightly past my intended touchdown point.

The smooth shape also allows the P2010 to achieve a cruise speed edging close to 140 ktas, burning less than 11 gallons per hour. With fuel tanks installed in the wing box behind the main spar that can carry 62 gallons of 100LL (or 91 octane mogas thanks to its flex-fuel Lycoming engine), the P2010's range is an impressive 750 nm with VFR reserves.

The P2010 is also sleeker and better looking than the high-wing competition, with gently upswept wingtips, a sculpted cowling flowing back to the well-proportioned fuselage, and curving cabin windows that come from the factory with dark tint. Surprisingly, the windows don't open, but the tinting and smart use of vented airflow keep the cabin reasonably comfortable during taxi on hot days. If you're feeling the heat, you can always pop open the doors (on the ground, of course). The P2010, by the way, has three doors instead of the usual two found in most airplanes in this class – there are two up front ahead of the wing struts and a full-size door in the back on the right side that makes entry and exit for rear-seat passengers a carlike experience.

The seats themselves are carlike as well, with multiple adjustments for seat height and fore and aft position, reclining seat backs and seatbelts with familiar tongue buckles. Oddly, the rear seats are placarded to prohibit all those nifty adjustments, one of the maddening side effects of the Part 23 certification process. To meet the U.S. regs, Tecnam was forced to swap its European rear bench seat for the same crash-resistant seats that are installed up front. Because all the seats are the same part number, the rear seats have the same adjustment handles and levers as the front seats, but the FAA prohibits passengers from using them.

The first thing I did when I sat in the back seat was to start playing around with the adjustment levers until a Tecnam rep pointed to the placard. The rear seats, by the way, can be removed in minutes, and a panel taken off the front of the baggage compartment as well, allowing bulky items to fit in the cabin without problem. There is also a handy baggage compartment door on the right side of the fuselage.

image: http://www.flyingmag.com/sites/all/files/_images/201510/Tecnam-P2010-Specs.jpg

Standard price \$345,000	Max useful load 992 pounds
Price as tested \$386,000	Max usable fuel 62 gallons
Engine Lycoming IO-360-M1A (180 hp)	Max rate of climb 850 feet per minute
Prop: MT, two-blade, fixed-pitch (74 inches)	Service ceiling 15,000 feet
Length 25.9 feet	Max speed 140 knots
Height 8.8 feet	Cruise speed (75% power, 6,500 ft.) 133 knots
Wingspan 33.79 feet	Max range 715 nm
Wing area 149 square feet	Stall speed (clean) 59 kias
Wing loading 17.1 pounds per square foot	Stall speed (full flaps) 50 kias
Power loading 14.2 pounds per hp	Takeoff distance 804 feet
Max takeoff weight 2,557 pounds	Takeoff distance over 50 feet 1,260 feet
Standard empty weight 1,565 pounds	Landing distance 656 feet

Flying the P2010

I flew the P2010 at Tecnam's U.S. headquarters at the Sebring Regional Airport in central Florida in early summer. Overcast skies prevented the temperatures from rising to the sweltering levels I was bracing for, but it was hot enough. There's no option for air conditioning in the P2010, but I wouldn't expect the cabin to get much hotter than other light singles.

The P2010 is a larger cousin of Tecnam's two-seat P2008 light sport model, which also features a composite fuselage with strutted metal wing and tailplane. But there's no doubt the P2010 is a more solid airplane with a suitably more substantial look and feel. The seats are comfortable and the controls fall easily to hand. The G1000 is typical fare, with the backup display being a bright and sharp LCD unit from Mid-Continent Instruments with a 45-minute emergency battery to get you back on the ground in case of electrical power loss. Nice touches in the cabin include auto-style cup holders, adjustable map lights in the ceiling, a flip-down sunglasses holder, map and storage pockets galore, and the novel fire extinguisher location under a removable panel in the floor.

One of the first characteristics of the P2010 I noted when heading out toward the departure runway at Sebring was what a joy this airplane is to taxi. The free-castering nosewheel turns 90 degrees in either direction, allowing for smooth (and ridiculously tight) turns with minimal brake pedal pressure. It's not often that the first thing I talk about during a pilot report is how well an airplane taxis, but I couldn't help but notice that the P2010 handles great on the ground.

The takeoff from Sebring's Runway 19 with Tecnam director of U.S. sales Shannon Yeager in the right seat involved holding the P2010 on the runway to 65 knots and then letting it fly off on its own. It wanted to get airborne sooner, but waiting until 65 allowed speed to build immediately to 73 knots for the initial climb before retracting the flaps and then up to 83 knots, the P2010's best rate-of-climb speed. At 600 fpm the climb rate wasn't spectacular, but it was adequate.

I tried some steep turns, slow flight and stalls over nearby Lake Istokpoga and found the P2010 to be a rock-solid airplane with balanced control harmony and nothing that raised an eyebrow. The

P2010 makes use of a stabilator that takes no time at all to become accustomed to. You lead turns with the rudder and follow with aileron; a small aerodynamic fence on the rudder trailing edge improves rudder feel.

In cruise above 120 knots, some left rudder trim is needed to keep the ball centered because the P2010 is so aerodynamically efficient. I let the speed build to 133 knots, where we were showing 10.4 gallons per hour fuel burn. The laminar flow wing soaks up turbulence better than, say, the high-lift wing on the Diamond DA40, making the P2010 a solid IFR platform, I would guess, though we stayed well clear of clouds.

We weren't permitted to wander far from home base since the P2010 I was flying was a test-flight airplane on an experimental ticket, so we headed back to Sebring for touch-and-goes. Yeager offered to demonstrate the first landing, but I waved him off, reasoning that I should be able to handle this light four-place single without any trouble. I was right. Besides a tendency to want to keep on flying, the P2010 was docile in the pattern, with its spring-steel landing gear soaking up the touchdowns, which are flatter than in a Skyhawk. In fact, this is an airplane you'll want to pull out of the hangar and occasionally just take around the patch for the pure fun of it.

But really, the P2010 will be in its true element when you load it up and go somewhere. Buyers will have no trouble flight planning for four full-size adults with golf bags and 2.5 hours of fuel for a respectable range. You'll want at least 2,500 feet of runway, though, and longer than that if the runway isn't paved. Landing on grass or even gravel strips in this airplane is no problem because the wheelpants sit up extra high, another nice feature.

Tecnam History

If you aren't familiar, the history of Tecnam is a fascinating glimpse of general aviation in Europe in the days right after World War II. Liugi and Giovanni Pascale, brothers from Naples, Italy, started building airplanes together in 1948 under the name Partenavia. Nationalization of Italy's aerospace industry eventually brought the company under the umbrella of Aeritalia, which has since been absorbed into aerospace and defense giant Finmeccanica.

The type certificate for one of the Pascale brothers' most popular models, the P68 twin, was sold off to help them finance the formation of Tecnam in the mid-1980s near Naples. They started out with their new company building components for airliners, like MD80 aft fuselage engine mount sections. It paid the bills, but the brothers longed for a return to their aircraft design roots and soon introduced the Rotax 912-powered P92 Eaglet light sport airplane.

Since then, Tecnam has created a dozen aircraft models (not to mention several more derivatives on floats and skis and with tailwheels). Its name has become synonymous with light general aviation in Europe. On the drawing board is a single-engine sport jet with a podded turbofan atop the fuselage, a straight, stubby wing and room for two. (The P68, meanwhile, is still being produced today by a different company, Vulcanair in Casoria, Italy.)

Power in the P2010 comes from a Lycoming IO-360-M1A four-cylinder engine, an efficient (and proven) choice that helps keep the purchase price of the P2010 down while ensuring fuel bills won't break the bank. As we mentioned, there's plenty more room under the cowl, however, and Tecnam

is hinting that bigger engine choices might be offered someday. We'd love to see an IO-540 or diesel option.

The P2010's introductory price of \$345,000 has since been set as its regular base price. The options list isn't long, but there are some things you'll probably want, including an interior upgrade that costs \$8,000 and a Garmin GFC 700 autopilot for \$33,000. Traffic advisory system and Stormscope are also offered. Weeping-wing TKS ice protection is coming, Tecnam says, as is an option for a constant-speed MT prop to replace the 74-inch fixed-pitch propeller, which should boost cruise speed to around 145 knots.

Tecnam has delivered a few dozen P2010s in Europe since EASA certification was notched. Now the company is turning its attention to the United States, where its name is less well-known. U.S. certification is expected this month after FAA validation flights in Italy. The company has sold more than 3,500 airplanes worldwide, so you know it's a name you can trust – even if you have trouble pronouncing it or pointing to the location of its factory on a map. But one thing is for certain: If you're in the market for a new light-piston single, the P2010 has to be on your shopping list.

Read more at <http://www.flyingmag.com/aircraft/pistons/we-fly-tecnam-p2010#hvElGwBPM4zjGfsT.99>