

230SE/STOL

A CONVENTIONAL AIRPLANE WITH
EXCEPTIONAL SAFE STOL AND
SLOW-FLIGHT ABILITY

PETERSON'S PERFORMANCE PLUS, INC.
1465 SE 30TH • EL DORADO, KS 67042



The Great American Dream

WHAT IS THE GREAT AMERICAN DREAM? IT'S FREEDOM.

FREEDOM to fly where you want, when you want, in your own luxurious airplane.

FREEDOM to fly into short, remote strips or international airports with equal ease.

FREEDOM from worries about stalls, spins, emergencies, or inadvertent flight into marginal weather conditions.

FREEDOM from worries about resale value, maintenance, or insurance costs.

FREEDOM from having to choose between either an ultra-safe airplane, or a good cross country airplane.

FREEDOM from worries through the use of some of the most advanced technology ever certified by the FAA.

FIND FREEDOM IN YOUR OWN 230SE/STOL.



**IN ALL THE WORLD...ONLY THE
230SE/STOL**

- ★ CAN TAKE OFF IN LESS THAN 500 FEET SAFE AND LEVEL
- ★ CAN APPROACH AT 55 KNOTS IN A LEVEL ATTITUDE
- ★ CAN TOUCH DOWN AT 35 KNOTS IN LESS THAN 400 FEET
- ★ CAN PATROL ALL DAY AT 55 KNOTS
- ★ AND CAN STILL CRUISE WITH 4 PEOPLE AND ALL THEIR LUGGAGE AT 140 KNOTS

WHAT MAKES THE 230SE/STOL SO SPECIAL?



- ★ Slower takeoff and landing speeds with shorter distances
- ★ Safe, flat attitude during slow flight which produces:
 - * Complete stall resistance
 - * Crisp, responsive aileron control
 - * Better over-the-nose visibility
 - * Better go-around capability
 - * Better crosswind control
 - * Ability to loiter at 55 knots for up to ten hours
 - * No unsafe, high angles of attack
- ★ Improved capability for short strips
- ★ Improved safety in an emergency through:
 - * Ultra-slow approach speeds with the engine out
 - * Reduced impact forces
 - * Ability to make a forced landing in a smaller clearing
- ★ The ability to fly slow safely while in poor weather or with lowered visibilities
- ★ Large, comfortable cabin with two big doors
- ★ 140-knot cruise with a 900 mile range
- ★ Proven safety record
- ★ Proven resale value
- ★ Low maintenance
- ★ Reasonable insurance rates

WHEN YOU CONSIDER EVERYTHING, NO OTHER AIRPLANE OFFERS SO MUCH SAFETY AND PERFORMANCE WITH A PROVEN TRACK RECORD SPANNING OVER FORTY YEARS.



FEATURES OF THE 230SE/STOL

The effect of the 230SE/STOL's high lift Canard provides benefits that no other FAA-certified system can equal. Through aerodynamics, the Canard permits the 230SE/STOL to fly slowly while maintaining a safe, stall-resistant, level flight attitude. It is important to fully understand this concept, as it separates the 230SE/STOL from all other currently produced utility/STOL aircraft.

Other aircraft can achieve slow flight only through the use of high angles of attack while "hanging on the prop" well behind the power curve. Not only is this type of flying very demanding and unsafe, but it generates a number of problems. Among these are poor maneuverability, operation close to the stalling angle of attack, heavy sink rates, poor forward vision, poor crosswind control, poor go-around capability, engine heating problems, and most of all, the dangers associated with a partial or total engine failure. In addition, this type of aircraft will lose most of its ability to achieve slow speeds when the engine has quit, as engine power is required to operate behind the power curve. Thus, this type of STOL aircraft is really no safer than any standard airplane during an emergency landing.

The 230SE/STOL's high-lift Canard allows the airplane, through aerodynamics, to operate in a safe, relatively flat attitude while staying ahead of the power curve. This, in turn, eliminates all the problems and safety issues associated with the standard utility/STOL aircraft. This is the only FAA-certified system that will permit this type of operation and safety.

In addition, the high-lift Canard provides additional pitch control at ultra-slow speeds by augmenting the aircraft's elevators. At these speeds, the extra pitch authority is vital to not only a slower landing, but preventing possible damage to the nose wheel. Operating from rough or soft surfaces is also improved with the ability of the Canard to lift the nose wheel free from the ground at much lower forward speeds. Pitch forces on the control wheel are also reduced, much like having power steering, so that you can fly slowly while using only your finger tips.



WHY DON'T YOU BUILD YOUR OWN AIRFRAME?

We use certain models of the Cessna 182 airframes in the manufacture of our 230SE/STOL, just as Cessna purchases engines, tires, radios, etc., from their suppliers. Because we use the Cessna 182,

our owners have the advantages of economy, proven reliability, and safety with years of refinement inherent with this airframe. Further, our owners are assured of parts availability and trained service for the Cessna airframe throughout the world.



WHAT ABOUT THE 230SE/STOL'S TAKEOFFS?

Normal takeoffs in the 230SE/STOL, with 20 degrees of flaps, finds the airplane airborne in a level attitude and climbing in a still level attitude. The 230SE/STOL does not hang on the prop with the nose up in a "scary" attitude as do other STOL aircraft.

The 230SE/STOL's level attitude in takeoff and climb out is a safe flight attitude free of any potential stall possibility with unobstructed forward visibility for still-added safety. It is a comfortable, as well as a safe, attitude.

Obstacles in the climb out path can be avoided by turns which can be started as soon as the 230SE/STOL is airborne. Such is the controllability and maneuverability of the remarkable 230SE/STOL that, with moderate practice, turns of a 300 foot radius can be accomplished within seconds after lift off.



WHAT ABOUT THE 230SE/STOL'S LANDINGS?

The same features that make the takeoffs short, level, comfortable and safe apply equally as well to approaches and landings. There is no "recommended" procedure for an approach and landing. Approaches can be made with or without power. They can be made steep or flat. Without flaps they can be made fast, or with flaps the approach speed can be slowed to 45 knots.

The flat attitude provides excellent stall resistance, superb forward visibility, excellent crosswind control, and a go-around normally will not even require full power. The slow speeds also allow much more time to plan and execute a stabilized approach.



WHAT ABOUT THE 230SE/STOL'S SLOW FLIGHT?

With the flaps extended to 20 degrees, flight in a relatively level attitude may be made down to 55 knots. At this speed, at sea level, using a power setting of 16 inches and 2,000 rpm amounts to about 30% of the power available. This is barely above idling power, hence, no cooling or overheating problems are encountered. At this speed, fuel consumption is 7 gph, and the endurance is over eleven hours.

With the flaps retracted, the 230SE/STOL is a conventional airplane. The high-lift Canard provides an additional amount of lift, but otherwise its effect is not noticeable in cruise, except to provide a slight flattening of the airplane's attitude in turbulent air.



WHAT IS SO DIFFERENT ABOUT THE 230SE/STOL'S STALL?

Inadvertent stalls are next to impossible, deliberate stalls can be affected by the usual methods, but recovery from an intended stall is noticeably docile, and complete control around all three axes is solidly available through the stall. A slight release of back pressure on the controls provides the immediate stall recovery so rapidly that little or no altitude is lost in the recovery.



WHAT ABOUT SLOW-SPEED MANEUVERING?

With the 230SE/STOL's slow flight speeds, it is possible to execute a 180 degree turn in eight seconds without losing altitude. The turning radius in such turns is about 300 feet.



WHAT HAPPENS WITH THE 230SE/STOL IN CASE OF A POWER FAILURE?

Takeoff is the most critical situation in any flight, even though landing accidents are more numerous. With the 230SE/STOL's level attitude during takeoff and climb out, the pilot is at all times able to execute a fully controlled forced landing - only much slower than in an ordinary airplane.

A loss of power below 20 feet finds the 230SE/STOL still in ground effect and flying at its slowest speed, therefore, an immediate slow touchdown can be made.

Above 20 feet, the 230SE/STOL has accelerated to a speed that permits a power-off glide of 60 knots to a fully controlled forced landing with adequate flare power for a slow touchdown and short landing roll.



WHAT ABOUT MAINTENANCE?

The 230SE/STOL's high-lift Canard is designed to be readily inspected, maintained, and repaired in the field away from normal repair facilities. There are no forgings, castings, or intricately formed parts. Sheet metal and steel tubing are used exclusively for easy repairs. The high-lift Canard does not interfere with normal engine servicing, and can be quickly removed for major engine work.

IN ALL THE WORLD...

THERE'S ONLY THE 230SE/STOL...


That can take off and land at very slow speeds in very short distances requiring no extra pilot skills.

That can patrol at very slow speeds with fullest controllability and maneuverability.

That does all of this in a safe, comfortable, level attitude.

That places this unprecedented performance at the easy command of the highly skilled pilot or the weekend winger.

That guarantees exceptional STOL performance whenever it's needed while providing the comfort, reliability, serviceability, operating economy and cruising performance of a conventional airplane.



YES, THERE ARE
MANY WONDERFUL AIRPLANES,
AND SOME HIGH PERFORMANCE
STOL AIRPLANES,
BUT IN ALL THE WORLD,
THERE'S ONLY THE 230SE/STOL
THAT COMBINES BOTH
STOL AND CONVENTIONAL
PERFORMANCE IN A SINGLE, SIMPLE,
SAFE AIRPLANE FOR MAXIMUM UTILITY.



The Great American Dream

Peterson's Performance Plus, Inc.

El Dorado Municipal Airport

1465 SE 30th Street

El Dorado, Kansas 67042

(316) 320-1080

www.260se.com



**Todd & Jo
Peterson**

