



## ELECTRIFY YOUR TRAINING MAKING PILOT TRAINING MORE AFFORDABLE

Electric aviation presents training schools (and recreational aviators!) with an amazing cost saving. The massively reduced service and maintenance schedule of electric aircraft, coupled with lower energy-per-hour usage, means that electric enabled flight schools can offer new recruits far greater value and increase profit margins by using electric trainer aircraft.



## Daily flight operations of an electric aircraft are approximately 1/10th the cost of a petrol equivalent

With a full carbon composite airframe, zero vibration electric motor, simple and clean design with minimal moving parts and an electric fuel energy source, a Pipistrel Alpha Electro incurs much much less service and maintenance cost, has reduced downtime due to shorter service time and has a far lower cost per hour of operations compared to a petrol engine counterpart. And to top it all off, it can be recharged with grid energy or renewable energy sources.

Even the lifetime cost of operations of an electric aircraft in your flight training school represents massive savings. The first motor service of an electric aircraft is at 2000 hours. A complete replacement motor is less than \$6000 at 2000 hours per service, it will be a decade before you need to consider motor replacement.

Depending on usage and charge cycles, a battery overhaul will probably be required at around 1000-1200 hours. The estimated cost or a reconditioned/remanufactured battery at this stage is \$30,000.00

This quick formula calculates the gross ROI of a typical 24 month operational period with 600 hours of flight training per year in the aircraft.

1200 hours operation x 350p/h - (90p/h instructor - 6p/h energy - 30000 batt.Overhaul - 1200 Motor service - (12 x 300 100 hourly service))= <math>270,000 gross profit (24 months) Below is a cost-benefit-feature analysis of the Pipistrel Electro compared to the 4 other most popular 2-seat trainer aircraft in Australia for 600 hours of operation per year. How does your current 2 seater trainer aircraft stack up against an electric trainer?

	Cessna 152	Jabiru J170	Sportstar Harmony Evektor	Sling LSA	Pipistrel Electro
Cost per hour of energy	27L per hour AUD \$51	24L per hour AUD \$45	15L per hour AUD \$28.5	15L per hour AUD \$28.5	22kW per hour AUD \$6
Cost (new or refurbished)	AUD \$237,000.00 (refurb.)	AUD \$224,000.00 (new)	AUD \$243,000,00 (new)	AUD \$279,000.00 (new)	From AUD \$219,000.00 (new)
Newest available	1985	2016	2022	2022	2018
мтоw	757 kg	600 kg	600 kg	550 kg	570 kg
Airframe	Aluminium	Aluminium	Aluminium	Aluminium	Carbon Composite
Top Speed	109 kn	130 kn	115 kn	130 kn	120 kn
Glide ratio	9:1	12:1	10:1	12:1	15:1
Rate of climb	715 fpm	500 fpm	1020 fpm	500 fpm	1220 fpm
Est. cost of 100 hourly service	\$3500	\$1500	\$1500	\$1500	\$300
Est. cost scheduled service and maintenance per 600 hours	\$22,000.00	\$12,000.00	\$13,000.00	AUD \$13,000.00	AUD \$3300
Ballistic parachute	No	No	No	No	Included
Newest available	1985	2016	2022	2022	2018

## **RA-AUS or GA flight training**

The Pipistrel Alpha Electro is registered in the LSA class, perfect for RA-AUS training operations in Australia. The lower cost certification requirements means a lower cost aircraft for a more easily achievable acquisition price of AUD\$220k new, including charger, with some ex demo options available.

The Pipistrel VELIS Electro is a EASA type certified aircraft allowing VH registration in the GA category to accommodate general aviation flight school operations.

While it is extremely similar in performance and flight handling characteristics, the refined safety aspects of the liquid cooled battery system and software systems has allowed the aircraft to achieve type certification. As such it has resulted in a slightly higher cost at approx. AUD\$350k depending on the selected options.



## **Tried and Tested**

There are now close to 200 Pipistrel Electro aircraft operating worldwide, with most of those running training missions at flight schools.

In Australia, to date there are 3 separate flight schools operating electric Pipistrel trainer aircraft in their curriculum. By using the electro for all Ab Initio and circuit training, the flight school enjoys a much higher profit margin on flight training hours, while the trainee enjoys a much nicer flight experience in a late model highly refined trainer aircraft.

Any flight school operating electric is instantly a more profitable and more economically stable business, and future proof against a rising cost of liquid fuel and possible sanctions non-decarbonised business activities.

