X-Air Aircraft

Information Pack

X-Air Standard

X-Air “F” Flaps

X-Air “H” Hanuman

X-Air Information Pack

The X-Air is a conventional three axis control aircraft which conforms to the category of Microlight/Ultralight Aircraft.

By definition, an Ultralight Aircraft is a fixed wing aircraft, with a maximum all up weight not exceeding 544 Kg, and not designed to carry more than two people.

The advantage of the Ultralight category is that, as aircraft have to be built to lower weight limits and as they are generally non-aerobatic and fly at lower speeds than conventional aircraft the construction techniques used are simpler and less expensive than conventional aircraft they are also cheaper in capital cost, as well as operational and maintenance costs.

Ultralight aircraft are a practical choice for individual owners who fly as a hobby, or perhaps farmers who will use their aircraft for checking on stock and water, as well as being used for basic training for new student pilots.

The X-AIR range now has 3 models developed over a number of years and more than 1000 aircraft have been exported all over the world including France, Italy, Spain, Greece, India, South Korea, Canada, USA, Portugal, Great Britain, and Australia.

AIRCRAFT DESCRIPTION

The X-AIR is a conventional three-axis aircraft layout, two-seater side-by-side, with high wing, and tractor configuration, engine in the front and they also has tricycle-landing gear.

The cockpit can be semi-open, or fully enclosed, with the lexan doors offering cold weather protection and a panoramic view to pilot and passenger if fitted.

The 3 models currently available are…

The Standard X-Air

As they say…. *"Welcome back to the days of affordable flying!"*

The X-Air is a fully featured, affordable light aircraft, developed over several years there are now over 1,000 flying world-wide. The French designed, Indian manufactured X-Air is the total package, its best attributes are safety, performance and affordability. The airframe kit comes with so many standard features that other aircraft just can't compete. The X-Air are without question the best selling Ultralight aircraft in Europe, England the US and Australia.

The X-Air "F" (Flaps Model)

The "F" model or "FLAP" model is an evolution of the standard X-Air; it has three stage flaps to slow the aircraft down for landing. The wing and tail on the Flap model also differs from the Standard X-Air, the flap model flies faster than the standard X-Air because of the different profile wing.

The X-Air "H" (Hanuman)

The Hanuman is the latest release from the X-Air stable; the aircraft is very different from the existing X-Air's. The Hanuman has been designed to accept a larger range of engines which include the Rotax 912, the Jabiru 2.2, and the 582 or 618 Rotax two strokes.

AIRCRAFT CONSTRUCTION

The X-AIR is constructed using a technique that has been refined over the past 15 years using aluminum alloy tubing covered with Dacron sailcloth. This technique has many advantages over other methods of construction, such as economy, lightweight, and easy replacement of components by the owner, making maintenance and repairs cheap and simple. Moreover, the structure will deform under impact, absorbing energy, thus providing an excellent passive safety factor.

BASIC FLIGHT TRAINER

The X-AIR is fully equipped to function as a basic trainer aircraft, the inherent stability of the X-AIR, combined with its low take off and landing speeds make it a very forgiving aircraft. Moreover the X-AIR refuses to spin, and has very mild stall characteristics.

The exceptionally docile behavior makes the X-AIR perfect for use as a basic trainer aircraft. The low capital costs and low maintenance costs mean that flight training by organisations using the X-AIR will be at very competitive costs.

AERIAL SURVEILLANCE AND OBSERVATION

The low flying speed, and short take off / landing distances make the X-AIR particularly suitable for farming applications and aerial observation organisations concerned with wild life, forests, power-lines etc.. In remote areas the X-AIR can be an effective "eye in the sky" for organisations such as the coast guard, armed forces, search and rescue and the police.

CONTROLS

The X-AIR features full dual controls; its behavior in flight is very similar to a conventional light aircraft, such as a Cessna 150 for instance. This makes the X-AIR an excellent machine for basic flight training at minimal capital and running costs, which are very low when compared to a conventional light aircraft.

Both the pilot and the passenger have their own control stick which is located between the legs, each person has a throttle control and the pilot has toe operated brakes; aircraft used for training can also be fitted with an emergency brake operated by the instructor. The control inputs in the X-Air are firm and very positive, the aircraft will fly for extended period's hands off and the aircraft is generally self-stabilising in turbulence. The X-Air also has a solid wooden floor in the cockpit meaning there is nothing to break when getting in and out and the floor strength also contributes to added safety in the event of an accident.

TRAILERING

We get asked about trailering the X-Air probably more than any other question, the X-Air can be pulled down in about 15 minutes.

Firstly, the Velcro attached wing nappy is removed, the wing skin tensioning belts are released, the aileron cable is detached and with the assistance of a helper the wing struts are removed and finally, the wings are detached from the main fuse tube.

Convenience is the main feature of the X-Air as all the wing removal can be done without tools. The wing can be reattached in about 25 minutes. A number of trailer designs are available for transporting X-Air Aircraft at very reasonable prices.

SUSPENSION

The suspension design is unique to Ultralight aircraft; it is similar to shock absorbers on a motorcycle and can handle all the bumps and potholes on grass and bush strips with ease. The X-Air can be landed quite heavily without any problems because the rear shocks take up the impact in a manner that leaves you and your passenger in disbelief as you can barely feel any shock in the cabin. The front wheel has dual shock suspension with trailing link design steering; the trailing link design straightens up immediately on touch down, so even landing in cross wind is relatively easy in the X-Air. The shock absorber design used on the X-Air offers outstanding rebound dampening, when the aircraft is landed heavily the shock compresses and then extends slowly, the aircraft is not launched back into the air like the bungee systems found on other aircraft. The undercarriage is very strong and durable being rated to 9 g's.

INSTRUMENTS

The standard instrument package we recommend consists of the following; tachometer, airspeed indicator, altimeter, compass, exhaust gas temperatures EGT, turn and slip indicator (ball), battery charge indicator, engine hour meter, engine water temperature gauge (Rotax 582) and cylinder head temperatures CHT (Rotax 503). Other optional equipment include radio, intercom, headsets GPS etc.. And may be deleted if low cost is a priority as they may be added latter on as needed. The Hanuman model is generally fitted with the Rotax or Jabiru 80 hp four stroke engines and these generally have a different instrument specification to the standard two stroke powered X-Air aircraft. The good thing with an X-Air is you can pick and choose whatever your requirements after your own individual needs, you are not locked in to an instrument package which does not suit your requirements.

POWER PLANT

The standard and flap model X-AIR are available with three engines from Rotax-Bombardier of Austria, the Australian produced Jabiru engine and the HKS from Japan.

Rotax engines are the worldwide recognized standard for Ultralight aircraft, with the available options being the 52 HP "503" or the 65 HP "582" and the 80HP "912".

The Rotax 503 is air-cooled, while the 582 & 912's are liquid cooled, all engines feature dual electronic ignition, electric start, reduction gear boxes to improve propeller efficiency and carbon fiber Brolga ground adjustable props. The two stroke Rotax engines are designed to run on normal automotive fuel mixed with two-stroke oil similar to motorcycles and the 912 is designed to run on unleaded or 100LL aviation fuel. Hence there is no need to go in search of aviation fuel, which makes the X-AIR less dependent on airfields and aviation fuel supplies. The fuel tank capacity of just over 59 liters gives a comfortable endurance of at least 3 hours at normal cruise with a 1/2 hour reserve and the optional 80 L fuel tank can take you even further.

The X-Air can also be fitted with the Australian made Jabiru four cylinder four-stroke engine. The Jabiru engine produces 80 horsepower and consumes approximately 15 liters of fuel per hour, whilst the Jabiru is an expensive option it is still worthy of consideration. The HKS engine has been successfully fitted to several aircraft overseas, but to date we have none flying in Australia and general feedback on HKS engine is that it performs similar to a Rotax 503 but has the benefit of reduced fuel consumption.

Our personal recommendation on engine selection is the Rotax 582. The 582 engine bolts to the X-Air without modification, it is economical, has exceptional performance (up to 1200 ft/min climb one up, 900 to 1000 ft/min

climb two up), oil injection is our recommended standard. The cheaper Rotax 503 producing 52 HP offers very good performance and economy one up but it seems to suffer a bit with two heavy pilots reducing the climb performance to about 600 ft/min. The Jabiru 2.2 and Rotax 912 engines both offer good economy, they are quite and very smooth running, and the only disadvantage is the added purchase cost and the need to modify the engine mounts.

AIRCRAFT STRENGTH

Structurally the X-Air will endure stress up to +6 g's positive and -4 g's negative. This is far beyond the limits, to which the aircraft will be exposed to, even in the most severe turbulent conditions. However, it is important to note that the X-Air is not designed to perform aerobatics. All components are protected from corrosion, by epoxy / polyurethane paints, or electrolytic processes to ensure a safe and long life of structural components even in coastal environments.

SPARE PARTS AVAILABILITY

It is important to consider the availability of spare parts and continued after sales support when you purchase an aircraft, lets face it, they occasionally get bent. We have in stock at any time approximately $10,000 in spare parts including all the components for the under carriage and other parts recommended by the manufacturer. We usually have at least one aircraft in stock, which can be accessed if needed, but with parts air freighted from the factory in France within 4 to 10 days we are guaranteed of a consistent parts supply.

AIRCRAFT DELIVERY

All orders are placed with the factory in France on the day you order your aircraft. We have the aircraft air freighted to Australia and can usually guarantee delivery within 4 to 10 days. Quite often we will have your colour choice available in stock in our factory and these aircraft are available for immediate delivery. Custom colors take approximately 8 weeks.

X-AIR INTERNET SITE

We have a popular web site set up with heaps of information on the X-Air; the site is proving to be extremely successful with about 500 hits a week. We are getting inquiries from all over the world and it's interesting to be in contact with other X-Air owners. An X-Air owner in France has supplied the web site with a photograph of his X-Air in the Alps fitted out with snow skis! (Check it out in our photo gallery). The Internet site is worth book marking and checking out every month or so as we are always updating the information, - for the Internet illiterate find a friend and check it out..... http://www.xair.com.au

Also check out our Yahoo eGroup web site where owners from around the world regularly discuss all matters of interest based on the X-Air.

ALL THE EXTRAS

With most aircraft kits you start at a base price and then add all the extras to arrive at the flyaway price. With the X-Air the fuselage kit comes complete with all the aircraft structure, composite pod and windscreen, toe operated drum brakes on the main gear, in-flight trim, enclosed fuselage on the rear (fast back), two fuel tanks, full dual controls and suspension that is truly unbelievable. The only extras with the X-Air are Lexan doors, wheel spats, front mudguard engine, prop, instruments and registration.

FINANCE

Our local Commonwealth bank is very approachable to X-Air finance inquiries having already assisted in a number of purchases. Our bank advisor tells me you can own an X-Air for less than $60 per week with a $5000 deposit, and about $100 per week with no deposit. For business such as farmers, the X-Air can be depreciated and fully tax deductible in most circumstances. (Please check with your personal accountant for individual circumstances).

CATEGORY 19 REGISTRATION

All of the X-Airs in Australia are currently flying with Category 19 registration. We are always being asked about Category 19 and following are the most asked questions.

How soon can I carry a passenger? The rules as they stand now prohibit the carriage of a passenger for the first 25 hours on an aircraft fitted with a Rotax engine, if the X-Air is fitted with the certified Jabiru 2.2 or the Rotax 912 and certified propeller it can carry passengers after 10 hours.

How far can I travel from my base? During the test period of either 25 or 10 hours you can be restricted to within 25 miles of your base area, if you need to travel further from home you can negotiate with your Category 19 Inspector for a larger area. Most will allocate your home state.

Can I get trained in my X-Air? The rules as they stand now are…. You can be trained in an X-Air aircraft if you are the owner or part owner of the aircraft; the aircraft must have flown off its test period (25 or 10 hours) before you can carry a passenger or instructor.

Example…. You purchased a second hand X-Air with say 25 hours on the clock, then you could be trained in the aircraft because you are the owner and the aircraft has flown off the test period.
Example…. You have purchased a new X-Air, it has 1 hour on the clock; you cant be trained in the aircraft because it has not completed the test period, but you can use the plane for your solo and cross country flying, but only if you don't carry a passenger or leave the area designated by the inspector.
Example…. You already have a full license and have just completed your X-Air, then after your inspection you can fly to your hearts content but you can't carry a passenger or leave the designated area for the duration of the test period.

How do I get my aircraft inspected? After completion of your X-Air you need to arrange a final inspection by a Category 19 Inspector, he will come armed with a checklist and supervise your final inspection of the aircraft. Once inspected and approved the paperwork to the RAA with the planes $220 initial registration fee ($110 per year after the first year) and you should be airborne within a couple of days.

Does Category 19 mean lots of extra work? Category 19 offers importers the opportunity to supply aircraft like the X-Air and many others to the Australian market, previously it would have cost us $250,000 to get the aircraft approved by CASA, the costs would have to be passed on to our customers making each X-Air approximately 50% more expensive. Category 19's only disadvantage as we can see it, is the requirement to fly out the test period. We are working on having this requirement reduced by CASA, but this will take time. It is sort of a compromise - they have accepted the aircraft on its previous flying history in other countries, but require a fly off period to ensure the aircraft won't fall out of the sky.

HOW HARD IS IT TO ASSEMBLE THE X-AIR? The X-Air is extremely easily to build; all that's needed are basic tools and an assembly area similar in size to a single car garage. The manuals supplied are in English and demonstrate the assembly procedure by the use of computer generated three-dimensional drawings, all that's needed is to start on page one and work your way through. Any questions can always be answered by telephone and we have assembly pictures on the web site for the most often asked questions.

Should you feel assembly might be past your abilities we can offer "Commercial Assistance" in the assembly of your kit. Basically this means, an experienced X-Air assembler can offer assistance in the building of your aircraft, you have to be in attendance during the construction period and are in control of the assembly but we can assist and offer guidance during the project and test flying of your aircraft. The cost of commercial assistance will add about $2000 to your purchase. (Please ask to be put in contact with a commercial assistance builder)

Thank you for your valued inquiry, should you have any further questions about the X-Air please contact us for additional information. The X-Air team is committed to providing the best backup of any aircraft manufacturer or importer in Australia and we can ensure you of our best performance and professionalism at all times.

Remember to check our web site for all the latest information and pricing.
Thank you and safe flying
Yours truly,

Michael B Coates Director X-Air Australia

Aircraft specifications Standard X-Air

TECHNICAL DATA	Rotax 503	Rotax 582	Jabiru 2200
Empty weight basic (kg)	230 kgs	237 kgs	262 kgs
Max. empty weight equipped (kg)	284 kgs	281 kgs	284 kgs
Max empty weight equipped with parachute (kg)	306.5 kgs	303.5 kgs	306.5 kgs
Maximum weight (kg)	544 kgs	544 kgs	544 kgs
Fuel capacity (l)	50 liters	50 liters	50 liters
Engine	Rotax 503	Rotax 582	Jabiru 2200
Cooling	air	water	air/oil
Carburetor	2	2	1
Electronic ignition	2	2	2
Power	52hp at 6500	64hp at 6500	80hp at 3300
Engine Displacement	496,7 cm3	580,3 cm3	2200cm3
Fuel mixture	2%	2%	NA
Fuel	92 octane	92 octane	95 octane
Wingspan		9.80 m	
Length		5.65 m	
Height		2.55 m	
Cockpit width		1.16 m	
Wings area		16,00 m2	
Loading		+6 -3	
PERFORMANCE	**Rotax 503**	**Rotax 582**	**Jabiru 2.2**
Take off run	140 m	120 m	120 m
Climb rate fpm	500 fpm	690 fpm	590 fpm
Max Cruise speed at level	54 knots	60 knots	60 knots
Cruise speed economical	45 knots	50 knots	50 knots
Consumption economical lph	14 lph	12 lph	9 lph
Landing		80 m	
Sink rate mini		690 fpm	
Climb speed		38 knots	
Stall speed		26 knots	
VNE		80 knots	
Service ceiling		12,000 feet	
Glide ratio		8:1 @ 38 knots	
Distance to clear 15 m at landing		140 m	
Distance to clear 15 m at take off	250 m	220 m	230 m

Aircraft specifications X-Air “F” Flaps

TECHNICAL DATA FLAP MODEL	Rotax 582	Jabiru 2.2
Basic empty weight	237 kgs	262 kgs
Max. empty weight equipped (kg)	281 kgs	284 kgs
Max. empty weight equipped with parachute (kg)	303.5 kgs	306.5 kgs
Maximum weight (kg)	544 kgs	544 kgs
Fuel capacity (l)	55	55
Engine	Rotax 582	Jabiru 2.2
Cooling	water	air/oil
Carburetor	2	1
Electronic ignition	2	2
Power	64hp at 6500	80hp at 3300
Displacement	580.3 cm3	2200 cm3
Fuel mixture	2%	NA
Fuel	92 octane	95 octane
Wingspan	9.40m	
Length	5.65 m	
Height	2.55 m	
Cockpit width	1.16 m	
Wings area	14.32 m2	
Loading	+6 -3	
PERFORMANCE	**Rotax 582**	**Jabiru 2.2**
Take off run (m)	120	100
Climb rate (m/s)	500 fpm	885 fpm
Max cruising speed at level	62 knots	70 knots
Cruise speed economical	50 knots	60 knots
Consumption economical (l/h)	12 lph	9 lph
Landing Distance	80 m	
Sink rate	685 fpm	
Climb speed	43 knots	
Stall speed	28 knots	
VNE	83 knots	
Service ceiling	12,000 feet	
Glide ratio	8:1 @ 37 knots	
Distance to clear 15 m at landing	140 m	
Distance to clear 15 m at take off	220 m	165 m

Aircraft specifications X-Air “H” Hanuman

TECHNICAL DATA	Rotax 582	Jabiru 2.2
basic empty weight	263 kgs	276 kgs
max. empty weight equipped (kg)	281 kgs	284 kgs
max. empty weight equipped with parachute(kg)	303.5 kgs	306.5 kgs
Maximum weight (kg)	544 kgs	544 kgs
Fuel capacity (l)	80	80
Engine	Rotax 582	Jabiru 2.2
Cooling	water	air/oil
Carburetor	2	1
Electronic ignition	2	2
Power	64hp at 6500	80hp at 3300
Displacement	580,3 cm3	2200 cm3
Fuel mixture	2%	NA
Fuel	95 Liters	
Wingspan	10,05 m	
Length	6,09 m	
Height	2,30 m	
Cockpit width	1,14 m	
Wings area	13,92 m2	
Loading	+6 -3	
PERFORMANCE	**Rotax 582**	**Jabiru 2.2**
Take off run meters	70 m	80 m
Climb rate fpm	885 fpm	900 fpm
Maximum speed knots	81 knots	90 knots
Cruising speed knots	70 knots	76 knots
Cruise speed economical knots	67 knots	70 knots
Consumption economical lph	14 lph	11 lph
Landing	70 m	
Sink rate mini	492 fpm	
Climb speed	46 knots	
Stall speed	34 knots @ full flaps 31 knots @ 25° 28 knots @ 45°	
VNE	105 knots	
Service ceiling	12,000 feet	
Glide ratio	9:1 @ 48 knots	
Distance to clear 15 m at landing	110 m	
Distance to clear 15 m at take off	220 m	

The X-Air ... an affordable, easy to build and easy to fly Fun-Machine with a lot of bang-for-the buck!

Flight Review By M. Mayerhofer

Over the past 5 years I have clocked up several hundred hours ferrying a variety of different X-Air's around Australia including 160 odd hours in my own aircraft. Powered by the trusty Rotax 582 and 618's and the 80 hp Jabiru engine they have performed almost faultlessly flying all over the country in the varying conditions that Australia can produce.

My story goes back to about 6 years ago when I was looking for an affordable, safe and easy to fly 2-seater Ultralight; I had to work within a very limited budget so my new aircraft had to be someone's second hand pride and joy or a new kit running with a second hand engine.

After looking at countless second hand, or as common up to about 8th – hand machines and a couple of new machines which were financially beyond my budget, I placed a couple of calls to nag Michael Coates of X-Air Australia with all sorts of questions about the aircraft he had just started to import from overseas. Some cash was scrambled between family and friends and we were off on the long drive from Brisbane to Mudgee in NSW, where X-Air Australia was based before re-locating to Queensland's Gold Coast about 4 years ago.

Having never seen one in the flesh, except for a demo video and a few pretty brochures a fair bit of time was spent with a very patient Michael Coates to crawl all over his demonstrator aircraft, finally he let me have a go at the almost new aircraft around the picturesque Mudgee area.

There was not much opportunity to fully explore the potential handling characteristics of this very neat design, but after a mere 30 minutes of play in the aircraft I was convinced that the X-Air was the right choice, it suited the flying I wanted to do and since there was a kit in stock in the colors we wanted a deal was struck on the spot and the 2 crates were strapped onto the trailer which was brought along – 'just in case'.

Building the X-Air

First impression when opening up the kit is…. WOW - everything is bubble-wrapped to perfection to avoid any transport damage; we also found the wrapping to be very handy to avoid scratching the tubing when handling the parts during the assembly process. Once the parts are unwrapped I was really surprised to find that there were no messy bags of hardware floating around as common in many kits commercially available, almost every bolt is in the pre-drilled hole it belongs to along with the correct washers, spacers and where applicable nuts just finger tightened.

The assembly process is extremely straight forward; by simply following a detailed and illustrated step-by-step assembly manual, they now also have a 3 hour assembly DVD which is supplied free with each aircraft. Windscreen and fuselage pod assembly is also very simple, with all the parts pre-cut and mostly pre-drilled with exception of the bolt holes to attach the 2-piece wind shield to the pod.

A little bit of planning and detailed work is required during the assembly of the 2-piece composite instrument panel which is also pre-cut and pre-painted (gel-coated). I found that fitting the desired instrumentation and associated wiring loom before fitting the panel and console into the aircraft was much easier than doing it in the plane.

The sporty looking and comfortable (as many hours of long cross country flights have proven) composite seats have their upholstery pre-fitted and are ready to be bolted onto the strong, pre-drilled and pre-cut plywood floor which comes up very neat when covered with marine carpet.

To finish the fuselage and empennage assembly only took about 3 days with the many assistants I had dropping by to check out the new plane, with the fuselage formers being pre-formed and ready to be riveted onto their allocated brackets and all covering being completely pre-sewn and ready for assembly the plane almost grows before your eyes. Tail feathers for example are simply bolted

together inside the beautifully finished skins, which ensure a tight fit of the Dacron covering fabric on every aircraft I have seen.

I decided to fit the more powerful Rotax 618 to the X-Air airframe which I had purchased in "due-for-an-overhaul" condition out of the back of a Drifter which was re-converted to a 582 after having done about 350 hours including a long over water flight to Tasmania by a Boonah flight instructor.

The engine was completely overhauled to 0-hour condition, incl. new radiators, hoses, and a new gearbox and with all the work completed it still came in at under half the price of a new 618; it was a real bargain and helped keep the project under budget.

With the engine installed and a new Aerofibre 68inch 3-bladed Brolga prop fitted final assembly was to be done at Barry Hempel's Hanger at Archerfield Airport with final inspection to be "supervised" by Ian Aviation.

With the relevant paper work completed, the engine run-in, a green light from the RAA and a freshly issued RAA licence which was a quick conversion from a VH-commercial and an overseas Ultralight licence the X-Air was readied for it's maiden flight.

Following some final engine and control surface (right deflections) checks, the aircraft was cleared for take-off and 1500 ft orbit over the field enjoying the luxury of Archerfield's main runway.

A strong but steady 30 knot wind which was a bit of a concern for me proved to be no problem for this light but amazingly stable machine. Following some basic stall testing, several touch-and-go circuits were completed and before I knew it the first couple of hours in our new pride and joy were already on the clock.

Unfortunately there was no hanger space available for my assembled aircraft at Archerfield and as I didn't want to leave my new pride and joy outside or take the wings off each day I got RAA approval to fly the X-Air to nearby Caboolture Aerodrome to complete the 25 hours flight test period.

Flying the X-Air

When initially inspecting the X-Air in Mudgee I was somewhat concerned about the relatively flexible mounted empennage, however my concerns quickly disappeared with the next 160 trouble free hours being flown in just over 7 months. Against my initial concerns there was no sign whatsoever of material fatigue. Also, it seems that this configuration plays a strong part in the X-Air's very soft riding characteristics, especially in rough, turbulent conditions, where the tail and also the flexible outer half of the wing takes most of the shocks in rough conditions.

One of the first things to notice during taxiing even on rougher grass surfaces is the suspension of the landing gear; with its large shock absorbers there is virtually no bumping or rattling noticeable, the aircraft almost glides across the ground.

Opening up the throttle the drum brakes prove to be efficient up to approx. 6000 RPM (with the 3:1 geared 618) and I understand the later models actually have larger brakes again, further increasing the efficiency. Initial acceleration when the brakes are released is brisk, even with 2 average people and 58 liters of fuel. At MTOW of 490 kgs, a safe rotation at approx. 45-50 knots is achieved after approx. 50-60 meters, with ROC settling at just under 900 fpm. Rate of climb with the 618, one POB and full fuel showed in excess of 1100 fpm at a climb speed of 45-48 knots.

After transition into straight level flight, and power reduced to 5400 RPM, a genuine indicated airspeed of 65 knots is maintained at this power setting, which the GPS proved to be correct. I have found over the last few years ferrying a lot of X-Air's around Australia that the difference between the 618 and the 582 powered versions in cruise is almost negligible. I think the X-Air is quite sensitive when it comes to changes in propeller pitch, especially with the commonly used Brolga Props, a different set of pitch blocks can easily add those few more knots in cruise performance if required at the expense of some climb performance.

There are also a few Jabiru powered X-Air's in the country which I have flown and besides a minor saving in fuel consumption I can see no real benefit in the much more expensive engine costing more than twice the price of the 582 Rotax.
Some people may argue the 2-strokes reliability, however a well maintained, modern 2-stroke is by no means as unreliable as their reputation used to be and the difference in fuel consumption is also not really an issue since almost all of the small 4-strokes, such as Jabiru, 912 etc., will burn around 20 litres/hour in cruise configuration when fitted to an aircraft like the X-Air.

Control response of the X-Air is excellent, with direct response and light stick forces in all 3 axis the X-Air sports a roll rate from 45 to 45 degrees of less than 3.5 seconds. There is a noticeable adverse yaw tendency if you turn with just the aileron but this however is easily encountered with the use of its highly effective rudder, the X-Air loves using the rudder.

Stall characteristics are completely without any vices and the aircraft can in my opinion be classed as quite stall resistant. Reducing power to a fast idle of approx. 3000 RPM, the first sign of a departing airflow does not try to get your attention with a pronounced stick shaker until below 26 knots. By the time the nose actually gently drops there is no reliable reading on the ASI left to determine an accurate stall speed but my guess with the GPS is its well under 25 knots. At MTOW, or ferry weight, most X-Air's stall around the 26-28 knots IAS and there are also no nasty characteristics noticeable in any configuration. Even with stick fully back, the aircraft does not fully stall and as soon as the nose lowers there is enough airspeed for the X-Air to un-stall itself and it just keeps flying. I guess this is one reason why the X-Air is such a popular choice with new pilots as their first plane.

The X-Air is not really demanding when it comes to approach speeds and an IAS around 35 knots in calm conditions up to 55-60 knots has been successfully tested. In my experience I find with 2 POB approaching at just under 50 knots seems to be most comfortable with absolutely no tendency to "balloon". With only one POB 42-45 knots seem to be right on the mark, the X-Air is probably the most controllable and stable plane I have ever flown on approach and flare, I have managed to safely and with full control land the X-Air with up to 30 knots of true cross wind and although I don't want to push it I would guess it could take more.

Except for one recent episode where a quick landing into a wet paddock was a wise decision after the engine sounded a bit odd right after take off I must say I never had a bad landing or a bouncer in any of the X-Air's I have flown and I can safely say that if you really bounce it on the deck for whatever reason or actually really feel a "hard" landing you probably have nothing to worry about more than your mates who have seen the stuffed up landing. The X-Air's landing gear is exceptional and there is no other way of putting it. It will not bounce and will take a tremendous shock even during a bad landing before anything brakes or bends.

It would be a bit too much to call the X-Air a serious cross-country machine with its modest 65 knot cruise, but for what this plane has been designed to do it is certainly the leader in its category, there are plenty of mega-bucks speed demons available if you need to regularly fly huge distances. However having said all this I have flown hundreds of cross-country hours in the X-Air, in all sorts of versions – with wheel spats, enclosed with the optional cabin doors or open, 2-stroke and 4-stroke powered, standard and optional long range tanks, alone or with company during long flights, and there is virtually no place it couldn't get to, even as a bar bones standard version, it is a pure pleasure to fly and still gets you from Brisbane to Narromine in less than a day, and Brisbane to Melbourne can be also done in two days and you even get to enjoy the scenery on the trip.

As for costs and building skills, I built my first X-Air several years ago before GST and I managed to get my plane airborne with the second hand 618 for just over $20,000. Today even with GST and fluctuating exchange rates I see from the X-Air web site it will cost under $17,000 for the complete airframe kit; on top of this you need to purchase an engine, instruments and propeller and any other goodies like GPS and radio etc..

The X-Air is still a highly attractive aircraft for anyone who is looking for an aircraft that is easy and fun to fly, economical to operate and maintain, does not require an extra mortgage for the initial purchase and also gets you to places when you want it to. The aircraft undergoes continual development and there have been quite a few changes from the original aircraft I purchased 5 years

ago, the latest ones I have flown have larger brakes, a wider entry to the cockpit, luggage racks and a few subtle changes which make the plane the complete package.

If you are concerned about building it yourself you shouldn't be…. Anyone who is capable of simply putting nuts on bolts can assemble the X-Air aircraft from the kit. For other things like wiring, instruments and engine issues X-Air Australia has a phone in Builder's Assistance Service under the supervision of an experienced person. Additionally after the aircraft is completed it can also be test-flown and delivered to almost any location within Australia by the people at X-Air. They have also just finished a DVD and video on building the plane which takes you step by step through the process from start to finish.

Am I glad I brought an X-Air ?? I sure am, I would have another one in a heartbeat if time allowed, for now I seem to have built up a reputation for flying them all over Australia and each time the phone rings I always think… where to now…. It's all good fun in a fun aircraft.

By M. Mayerhofer

Phone 0407 375 952.