

🇨🇦 Challenger II 582 Premium Package 🇨🇦

*These pricing packages apply only to Challengers sold in Canada.
Elsewhere there are differences in packages, pricing and currencies.*

The Challenger II 582 Premium Package at **Cdn \$31,875*** (List) consists of the **Challenger II Premium Airframe** with all the trimmings plus the incredible 65 hp liquid-cooled **Rotax 582 Power Pack**.

**Prices shown are subject to further reduction due to Soaring Super Loonie Discounts!
Please contact us for a quotation*

🇨🇦 Challenger II 582 Premium Airframe 🇨🇦

The Challenger II 582 Premium Airframe includes all the options, accessories and upgrades to provide maximum performance, utility and comfort in Canada.

The tail, wings and fuselage are pre-built at the factory from aircraft grade 6061-T6 aluminum. All hardware is provided and is AN aircraft quality.

Superlite fabric is provided pre-sewn into socks for the tail, pre-cut into top and bottom sections for the wings, and pre-cut into panels for the fuselage.

Full dual controls - sticks and rudder pedals - are installed at the factory. Throttles are provided for front and rear seats. Cushions and seatbelts with shoulder straps are standard for both seats. In-flight adjustable flaperons and pitch trim are standard with this package.

The cabin is fully enclosed with a Lexan wraparound windscreen plus doors on both sides. Very few ultralights have doors on both sides which is significant on floats when docking - the wind often takes away the choice of which side to put towards the dock so if you only have one door then half the time there is no way to get from the cockpit to the wharf!

The instruments included are Air Speed Indicator, Altimeter, Tachometer, Hour Meter, Compass and for the 582 a Coolant Temperature gauge.

A full electrical system is provided including regulator/rectifier, solenoid and electric start for the engine.

A 10 US Gallon fuel tank is included as standard.

For maximum speed, and good looks, the package includes the fibreglass nose fairing and three-piece mid-wing gap covers as well as full streamline strut and gear fairings plus wheel pants for the mains and nose gear.

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The landing gear includes upgraded main gear legs of 2024-T3 aluminum with chromoly steel inserts. All three wheels have upgraded aluminum rims and the main wheels are oversize with larger tires. The new third generation brakes are included to complete the gear configuration.

🇨🇦 Challenger II 582 Premium Power Pack 🇨🇦



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The Challenger II 582 Premium Power Pack is centered on the Rotax 582 UL DCDI Mod 99 engine and includes everything you need to produce thrust.

This engine, the well-proven second generation "Blue Head" version, has numerous internal improvements to enhance reliability, the benefit of Rotax's substantial real world service experience with the initial generation. The engine comes complete with dual electronic ignition, two spark plugs per cylinder, dual carbs, impulse fuel pump, air filter and a quite effective muffler. To attach this engine to the airframe we include the new motor mount with eight Lord mounts to isolate the airframe from vibration as well as stainless steel exhaust mounts.

The 582 is liquid cooled via an engine-driven water pump and thermostat so of course we include a complete radiator setup with everything you need to go flying - no trips to the hardware store, or the engineering department! This rad mounts in front of the engine on top of the wing parallel to the airflow rather than perpendicular so it creates the least possible drag. It is quite large to avoid overheating on even the most trying days in the most trying circumstances.

An integrated generator produces AC current (12V 170W) which is converted by the supplied regulator/rectifier to 12V DC (nominal). Electric start is standard with our Premium package.

The reduction drive is the preferred "tall" 2.6-to-1 unit which turns a 60" prop.

The prop is the top-of-the-line Warp Drive 3-blade ground adjustable unit with upgraded HP-L machined aluminum hub and three carbon fibre blades with wide tips and nickel leading edges for protection from spray, slush and rain. Users say this prop is near indestructible - please don't try to disprove them!

A wonderful aspect of the 582 is that the peaks of the horsepower and torque curves overlap and are quite flat plus start at a relatively low

	rpm. This allows one to pitch the prop into the peak power range without giving up on cruise!
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🇨🇦 No-Charge Choices for the Challenger II 582 Premium Package 🇨🇦

CHOOSE WING SPAN: long = 31.5 ft for max lift for floats and soaring OR clip = 29.5 ft for more speed and maneuverability. (See also chargeable mid-size wing option.)

CHOOSE CABIN: wide with low cockpit side rails OR narrow with high sides.

CHOOSE LEXAN: tinted OR clear wraparound windscreen and doors.

🇨🇦 Chargeable Options for the Challenger II 582 Premium Package 🇨🇦

OPTIONAL Midsize 29.5 Ft Wing @ Cdn\$525*

The optional 29.5 ft wing span is achieved via a special fibreglass wingtip that takes off a foot on either side. The wing itself is the same as the 31.5 ft version but the standard 1.5 ft bow wingtips are replaced with the optional 0.5 ft ones.

The benefits are a slightly higher cruise speed (still not a Lear jet though!) as well as a quicker roll rate for more sporty handling. This mid point between the long wing and the clip wing is suitable for float operations.

OPTIONAL 17 US Gallon Aluminum Fuel Tank @ Cdn \$650*

The factory 17 US Gallon aluminum long-range fuel tank represents by far the best value in terms of dollars per gallon versus other large aftermarket tanks. Many owners install long-range tanks for their convenience and flexibility.

OPTIONAL 582 All Season Kit @ Cdn\$1,375*

The optional 582 All Season Kit provides a cabin heat via a remote heater core with 3-speed electric blower and ducting plus cockpit-controllable louvres for modulating the airflow through the rad. The louvres function like the cowl flaps on high performance airplanes or like the shutters on some motor vehicles.

When the louvres are open they allow maximum airflow to avoid overheating during taxiing or prolonged climbs on hot days. Conversely, when closed they prevent overcooling during extended descents at low power settings. The louvres can be set to any interim position to keep the coolant temperature right in the middle of the operating range, the key to the high reliability of the 582.

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This option is strongly recommended if you are going to be flying in the Canadian cold season (September through June!) or at high altitudes.

OPTIONAL 582 Oil Injection @ Cdn\$775*

The optional 582 Oil Injection Kit includes the oil injection pump and control as well as two oil tanks which mount on either side of the radiator. In this setup the owner puts pure gas in the fuel tank instead of pre-mixing with oil. The metering system, based upon engine rpm and throttle position, delivers exactly the right amount of oil to each cylinder via diffuser jets in the intake manifold sockets. The tanks are quite large and contain enough oil for 10-12 hours of flight! The oil tanks have individual sight gauges and both gauges are visible from either side of the airplane. The oil tanks are designed with outlets front and rear and they are cross-linked so that oil is available in all flight attitudes.

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🇨🇦 The Fine Print! 🇨🇦

Prices are in Canadian Dollars - list effective February 1, 2007 - subject to change without notice.

Canada customs charges are Cdn\$225. Federal and Provincial sales taxes are not included and are in addition at applicable prevailing rates. Shipping is not included - freight charges to major Canadian cities will typically total CDN \$900 - \$1,200 for the 582 Premium. Your freight may be more or less depending on your location and optional equipment ordered.

Performance Table

The following figures apply only to the newest Challengers and engines.

All figures at ICAO standard conditions with 503 Engine.

Performance of older airplanes and engines will not achieve these levels.

Challenger II Performance		Long Wing	Clip Wing
Vne	This never exceed speed is very high for ultralight aircraft.	100 mph	120 mph
Top Level Speed	With a top speed of 96 mph and a stall of 24 mph, the long wing Challenger delivers an impressive high end without sacrificing friendly, low speed approaches and handling. A 4 to 1 speed range is unusually wide, few general aviation aircraft can exceed 2.8 to 1.	96 mph	100 mph
Cruise Speed	Low drag tandem seating, an engine tucked out of the slipstream, and attention to streamlining result in an unusually high cruise speed. Few if any designs can deliver this speed with such an economical engine.	35-85 mph	40-90 mph
Stall Speed flaperons extended (solo/dual)	The Challenger's large wing area and low weight result in a very low speed and exceptionally gentle stall. This is key to short field performance and is an important safety feature. It also contributes to the long wing Challenger's unequalled soaring capability.	24/28 mph	32/37 mph
Rate of Climb (solo/dual)	The rate of climb is very strong by any standard. This together with a climb speed in the low 40s means the plane goes forward quite slowly while going up quite quickly, resulting in a helicopter-like angle of climb! Getting out of short fields (and lakes) is a snap.	1,100 / 750 fpm	1,000 / 650 fpm
Service Ceiling (solo/dual)	Most people think of ultralights as only flying low, near the ground. The Challenger goes high too, up into oxygen country. The heated cabin takes the nip out of the thin air found at these exalted altitudes.	14,000 / 12,500 ft	14,000 / 12,500 ft
Glide Ratio	The glide ratio of Challengers is excellent by powered aircraft standards. From 5000 feet you can glide 11 miles with the engine off! Key to the unique soaring capability of the long wing are the low drag tandem seating and low wing loading, which result in a low sink rate, plus the low stall speed, which permits very small diameter turns in the thermal's core.	11 to 1	9 to 1
Minimum Sink (solo/dual)	Engine off, the long wing Challenger drifts down at an unusually gentle rate, taking a full quarter hour to reach the ground from 5000 feet. Apart from aiding soaring, this low sink rate has obvious safety benefits. The clip wing sinks faster than the long wing but is still very gentle by General Aviation standards.	350/450 fpm	500/600 fpm
Takeoff & Landing	The large wing and light weight together with the high power-to-weight ratio give great STOL performance.	75-200 ft	125-250 ft

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Maximum Crosswind	The crosswind capability of the Challenger actually equals or exceeds that of many General Aviation aircraft. As an example, the Cessna 172 has a crosswind capability of 17 mph. Puddlejumper amphibious floats have a steerable nose wheel which allows Challengers so equipped to retain their crosswind capabilities.	20 mph	30 mph
Fuel Consumption	Few two-seat aircraft are as miserly on fuel. Challengers can use auto gas, avgas or marine gas, which may be intermixed. Most owners prefer auto gas because it keeps costs to a minimum.	2.0-4.5 USgph	2.0-4.5 USgph
Endurance no reserve (10 / 15 USgal)	Endurance depends of course on how fast you want to cruise - low and slow for sightseeing or blistering along to get somewhere soon. The factory offers a 10 US gallon fuel tank and a 15 US gallon long range tank is available from a Canadian supplier of Challenger accessories.	2.2-5.0 / 3.3-7.5 hrs	2.2-5.0 / 3.3-7.5 hrs
Range no wind no reserve (10 / 15 USgal)	Range varies with the size of your fuel tank, how fast you cruise, how much reserve you allocate for contingencies, and of course the wind. Non-stop flights of over 300 miles have been made but it's actually more fun to make intermediate pit stops and be greeted by groundlings as if you're a movie star in a Ferrari!	200 / 300 sm	200 / 300 sm

Figures are for two-seaters on wheels with standard fuel and 170 lb. occupants.
 Numbers assume the Rotax 503 engine and average sea level conditions.

Specifications Table

The following figures apply only to the newest Challengers and engines.

Performance of older airplanes and engines will not achieve these levels.

Challenger II Specifications		Long Wing	Clip Wing
Wing Span (opt Fiberglass - std Bow tips)	The span of the long wing can be reduced 2 feet by replacing the standard bow wingtips with the new optional fiberglass tips, thus increasing roll rate and cruise speeds. The shorter span of the clipped wing gives still higher speeds and faster roll rates plus a more aggressive, sportier feel.	29.5 ft - 31.5 ft	26.0 ft
Wing Area (opt Fiberglass - std Bow tips)	A low empty weight and a very large wing with a 5.625 foot chord are the keys to the impressive carrying capacity of the Challenger. The long wing has 40-70% more lifting surface than competitive designs. Even the clip wing has 20-40% more area. More lift means less horsepower is required to achieve goals.	166 sqft - 177 sqft	146 sqft
Length	The fuselage fits nicely in most garages, making that a popular place for assembling Challenger kits. The wings fit easily too because there are two of them!	20 ft	20 ft
Height	PuddleJumper amphibious floats add 20" to the height on the ground. Skis add an inch or two.	6 ft	6 ft
Empty Weight	A very light airframe, built by the factory using triangulated 6061-T6 aircraft-grade aluminum, is the secret to the Challenger's unusually low weight. A low weight benefits all aspects of performance. Most competitive aircraft are 100-200 pounds heavier! Weights quoted are typical and very by the builder's construction technique and accessories!	~ 300 - 350 lbs (Wheels/Skis) ~ 410 lbs (PJ Floats)	350 lbs (Wheels/Skis)
Gross Weight (+6G / -3G Ultimate Load Factors)	The Challenger employs a fully triangulated truss design which is not just lighter but is significantly stronger than alternatives. Since construction of such a design is beyond the capabilities of most homebuilders, every Challenger airframe is completely built in jigs at the factory.	960¹ lbs	960¹ lbs

¹ For Challenger II long wing serial numbers before #0603 gross weight is 800 lbs at +6G / -3G. All Challenger II aircraft with the Rotax 447 engine are limited to a gross weight of 800 lbs. Options and accessories increase empty weight.

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Fuel Capacity	Canadian Challengers are normally equipped with a 10 US gallon fuel tank. We can supply a 15 US gallon long-range fuel tank manufactured by a Canadian company and approved for use in Challengers.	10, 15 USgal	10, 15 USgal
Seats	The Challenger uses tandem seating rather than side-by-side to achieve less drag for higher speed as well as to place the pilot ahead of the wing for magnificent helicopter style visibility in all directions - even in turns. Tandem seating with doors on both sides makes docking on floats a snap. Most tandem ultralights only have one door - what do they do when the wind forces docking on the other side? They can only go elsewhere!	2	2
Cabin Width	Two cabin sizes are available: a wide body with low cockpit side rails and a narrow body with high sides. The wide body is easier to enter and exit. The narrow body has somewhat less drag. Compare with the Cessna 172 cabin with only 39.5" for two people across!	Wide Body 32 in Narrow Body 26 in	Wide Body 32 in Narrow Body 26 in
Head Room	The Challenger is famous for it's spaciousness - it was designed by a big guy for big guys and over the years it has gotten even bigger. And we do mean big! 6' 5"? No Problem! 6' 7"? Call us - we can tailor to you!	Front 43 in Back 40 in	Front 43 in Back 40 in
Leg Room	While we do suggest you leave your stilts at home, even those long in the leg will fit comfortably in recent model Challengers. Redesigned seats and supports add all important inches front and back and give passengers additional footrests and increased knee room.	Front 46 in Back 44 in	Front 46 in Back 44 in