

A PASSION FOR FLIGHT

MC



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THE FLIGHT DESIGN MC A PASSION FOR FLIGHT

The MC (Metal Concept) is the exciting new aircraft from Flight Design. Made for people who love flying and need true utility in their aircraft, the MC was created using aluminum, steel and composites for the most attractive, rugged and efficient airframe possible.

The MC is designed specially for the Light Sport Aircraft category and was designed using state of the art engineering design programs and some new ideas to make a metal airplane that is first rate in cabin comfort, ease of flight and performance.

The MC is the alternative for the pilot who wants to own a metal aircraft but wants a truly giant cabin and the excellent visibility that has made the CT line of aircraft famous.

Flight Design has done intensive customer research at leading air shows internationally. Based on those results Flight Design decided to complete its LSA range of products with an outstanding metal airplane for use by both private owners and flight schools.

Flight Design is committed to be the leader in progressive design concepts and safety improvements. Using FEA (Finite Element Analysis) to further refine the structural design of the MC, Flight Design has again moved forward in the use of modern engineering tools for improving design principles for light aircraft.

The Flight Design development team has worked for more than 36 months on development of the MC. Next generation computer flight test systems were used to develop the flight dynamics in the same way than it was used on the best selling CTLS.

The visibility and comfort of the MC makes all your flights more enjoyable and a better environment for learning how to fly. The MC is equipped with the new composite landing gear design of the CTLS to help make all of your landings, happy ones.

All Flight Design aircraft are designed around the special demands of flight schools and clubs as well as private owners. The way to get more young people interested in flying and your school in particular, is to offer striking new aircraft with advanced avionics. Many established pilots are also looking for new, more affordable challenges as well.

A modern aircraft should have all the safety improvements available for protecting the pilot and passenger. The MC has a welded steel safety cage with CAD design crumple zones to keep the cabin intact, four point pilot harnesses and standard parachute system. Wing located fuel tanks are an important addition to the list of safety features on the MC. The FD single fuel lever fuel system is used on the MC to reduce pilot fuel management incidents.

The MC is being introduced having already achieved the Special Light Sport Aircraft FAA airworthiness certificate.

If you have a passion for flight try the MC and enjoy the high cruise speed, low stall speed, and the giant cabin of the MC.



AERODYNAMICS

The aerodynamic concept of the MC is the same as the famous CT but using metal as a basic material. Clever thinking has overcome convention creating a design that is both elemental and beautiful.

The long fuselage combined with a conventional stabilizer-elevator provides for exceptional dampening and pitch stability. The result for you the pilot is a smooth ride in turbulence and very easy landings.

The optimized shape of the fuselage reduces the drag and cleans the airflow to the stabilizer. A small fence at the trailing edge of the fuselage root rib closes the flap slot for negative flap deflections increasing lift and further reducing drag.

The wing of the MC uses the same efficient airfoil as the CTLS with the new advanced winglets for reduced induced drag and improving climb, cruising range and aileron control at low speeds.





HAPPY LANDINGS!

Urethane polymer shock absorbers in the nose gear give high dampening and help to smooth out those hard landings we've all had. The composite main gear, developed and produced by a certified aerospace supplier is rugged and absorbs more than 50% of the energy on the first bounce.

New tires developed together with SAVA give the correct balance of durability, performance and light weight. Special long wear tires for Flight Schools are available.

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PLEASE FLY SAFELY!

The MC was designed by our engineering staff with the flight safety, performance and comfort in mind.

Metal has been used for aircraft since the beginning days of flying. Using modern CAD and FEA design tools bring new possibilities. The welded steel safety cell helps to protect

you and your passenger. The engine mount and its support to a backbone structure in the fuselage reduce the possibility of engine intrusion into the cell. Standard four-point harnesses absorb energy and reduce possible loads to the pilot & passenger. The strong windshield-uprights and massive upper construction com



plete the safety cell. The fuel tanks are sensibly located in the wings. The MC fuel system is maintaining the safety of single lever operation. The wide speed range and high structural margin of the MC give you peace of mind when the air gets bumpy. The MC has been subjected to numerous

static and complete flight-testing as a part of certification to 2 major Airworthiness Standards including: ASTM-FAA Light Sport Aircraft requirements and German LTF-BfU. Each MC is fully flight tested by our engineering test pilots and flown again after re-assembly and checked in the country of destination.



PRODUCTION

Production of the MC is performed in Ukraine by our young and highly motivated staff near the Black Sea resort area of the Crimea. Along with development of the original CT, our own R&D and manufacturing company was created. We are constantly expanding our production facility and staff to meet the growing demand. Ukraine has a strong aviation culture going back to the beginning of manned flight. Major air-frame and component manufacturers are now sourcing engineering and manufacturing here to take advantage of low production costs as well as one of the world highest engineering educational standards. The balance of safety and performance is attained through rational design, well organized manufacturing and the use of exceptional Western materials. We are proud to be at the vanguard of aviation technology and a leader in bringing that structural and aerodynamic technology to the light plane industry.





STRUCTURE

The MC structure is made from conventional steel and aluminum using solid rivet construction. Modern technology enabled us to have a very high useful load for a light sport airplane, not only compared to other metal airplanes, but also with most of the composite airplanes on the market. Inside the structure is coated with zinc chromate to give very good corrosion resistance.

GET COMFORTABLE

The 1.31m (52") wide cabin of the MC can fit the tallest and smallest people as well. People with heights of 1,55 – 2,00 m (5'-1" to 6'-6") sit comfortably.

Ample storage space is provided by a convenient jacket shelf for in-flight needs and additional baggage compartments are also accessible from inside the cockpit. Two windows in the rear give the cockpit a open feeling and a good rearward visibility.

Large Gull-wing doors held up by gas struts make entering and taking your seat easy. Three point latches and door seals keep you secure inside. Comfortable seats with molded foam padding and pneumatically adjustable seat cushion and lumbar support offer incomparable comfort and easy adjustment in height & length. The engine installation reduces vibration and cabin noise.

If you are finding it hard to find a Light Sport Airplane that fits you, try the MC, you will be pleasantly surprised.

Full dual controls and centrally located throttle quadrant are features of this ergonomically arranged cockpit. Easy to reach storage space and convenient map holders are thoughtfully provided. Standard ventilation and heating make flying the MC an all season event.

The MC allows up to 50 kg (110 lbs.) of baggage (total) to be safely stored in the storage compartments aft of the cabin area.



DURABILITY

A modern airplane should be built with durability in mind. During the design process, long term durability was considered. Though not required by certification, the MC will undergo fatigue testing. The lower material cost of the MC and its advanced design make it an affordable and intelligent choice. The MC is finished in a two-part urethane paint which is

beautiful, easy to take care of and very UV resistant. The urethane finish of MC will last years when properly maintained.



SERVICE

The new engine mount and control system design was developed with service and repairs in mind. The MC requires only a minimum of maintenance. At our Service Centers you can have this work done by our properly trained staff. You can also participate in a 2 day owner's training course at one of our Flight Design Service Centers. This course will enable you to

do simple maintenance yourself supported by our detailed maintenance manual and parts manual supplied with each MC.

Our local Service Center technicians are at your disposal for specialized work and repairs or to assist local mechanics on the basic maintenance of the MC.



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ENGINE DATA

Rotax 912 UL, 2.000 hrs. TBO
80 HP @ 5.800 rpm
1211 c.c. 9.0 to 1 Compression Ratio
Gearbox: 2.27 to one reduction ratio
Fuel: Premium unleaded auto fuel or
100 LL Avgas
Fuel consumption:
@ Max continuous RPM (5500) 23l/h (6 GPH)
@ 75% (5.000) RPM 14.4 l/h (3.8 GPH)

Rotax 912 ULS, 2.000 hrs. TBO
100 HP @ 5.800 rpm
1352 c.c. 9.0 to 1 Compression Ratio
Gearbox: 2.27 to one reduction ratio
Fuel: Premium unleaded auto fuel or
100 LL Avgas
Fuel consumption:
@ Max continuous RPM (5500) 25l/h (6.8 GPH)
@ 75% (5.000) RPM 16 l/h (4.2 GPH)

TRAVEL

The more you fly, the more the MC's superiority Shows. With the MC's long range, comfortable seats and large baggage compartments, long flights become an achievable and affordable adventure! The MC gives you the comfort and freedom to make your flying dreams a reality!



FRACTIONAL OWNERSHIP CLUBS AND RENTAL

The way to get more people involved in your club is to lower the cost and offer exciting new aircraft. With rental and training allowed by the FAA on Special Light Sport Aircraft, the MC is the right choice for Aero clubs and fractional ownership applications. With the new MC even less experienced pilots can safely enjoy the thrill of flying this exciting Light Sport Aircraft after proper transition training.





FLIGHT SCHOOLS & PHOTOGRAPHY

With expansive side windows, the MC makes non-commercial aerial photography a snap. An optional 16.5 x 25.4cm (6-1/2" x 10") photo window is available too. With its roomy cabin and superb visibility the MC is an ideal aircraft for support of agricultural operations, including animals, crops and forestry tasks. With its short field performance and rugged optional Tundra gear, a careful landing for inspection is easily performed.

* Get approval from local Aviation authorities on legality of all unusual operations

OPERATING COSTS

MC was built to get up and go. With low fuel consumption and low operating costs, you can afford to fly as much as you want

Hours per year	100	250	350	500	750
Total direct operating costs	\$ 34.50	\$ 34.50	\$ 34.50	\$ 34.50	\$ 34.50
Total indirect operating cost no hull insurance	\$ 20.15	\$ 8.06	\$ 5.76	\$ 4.03	\$ 2.69
Total indirect operating cost	\$ 44.41	\$ 17.76	\$ 12.69	\$ 8.88	\$ 5.92
Total operating cost including hull insurance	\$ 99.06	\$ 60.32	\$ 52.94	\$ 47.41	\$ 43.11

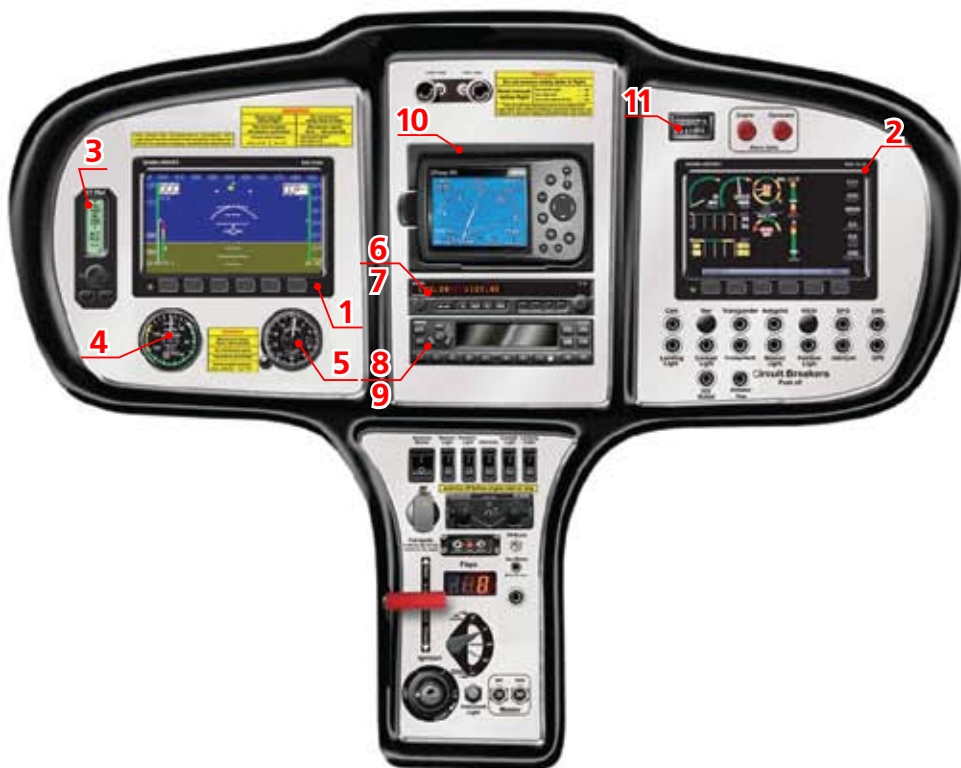




STANDARD EQUIPMENT

80HP Rotax 912UL 2000 hrs. TBO
Advanced two bladed composite propeller
Ballistic parachute system
Adjustable Sport seats (fore-aft & height) with headrests
Four-point harnesses
Two large baggage compartments
Flight and engine instruments (ASI, ALT, Slip indicator & UMA advanced analog gauges RPM, CHT, EGT.)
Wide Gull wing doors with gas struts
One-piece windshield with light green tinting
Electric flaps with LED pre-selector system -12° to +35°
Two wing tanks with 100 l (26.5 gallons) total capacity
Composite main landing gear: 4.00 – 6" main wheels with hydraulic disc brakes, steerable nose wheel 4.00 – 6"
12 cool new standard graphic patterns
Complete document package includes: Flight, maintenance and parts manual

COCKPIT OPTIONS

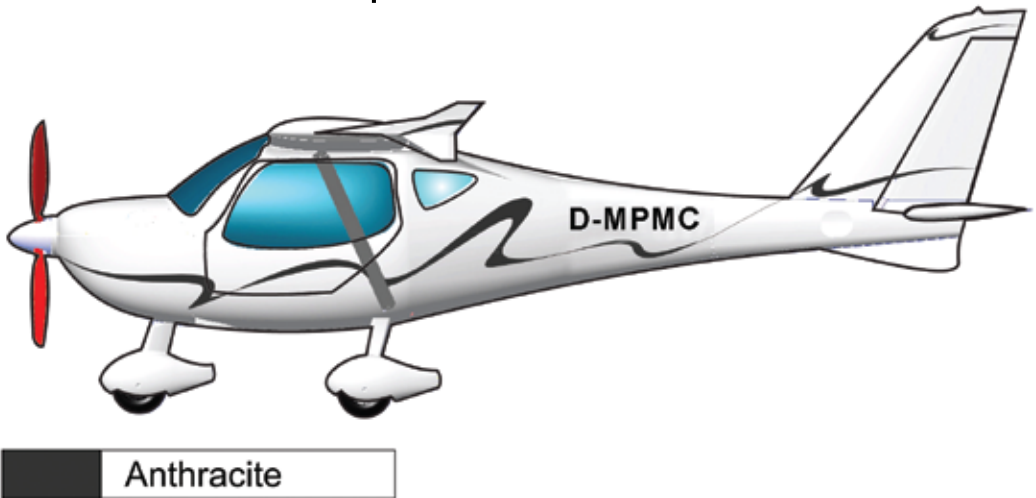


1	Dynon EFIS 100 Flight Information System
2	Dynon EMS 120 Engine Monitoring System
3	Autopilot FD Pilot 2-axis / 2 axis VS / VSGV (for Garmin G3X only)
4	Airspeed indicator small (57 mm), analog
5	Altimeter small (57 mm), analog
6	Radio Garmin SL40
7	Radio Garmin SL30
8	Transponder Garmin GTX 327 Mode A/C
9	Transponder Garmin GTX 330 (optional)
10	GPS Garmin 496
11	Hobbs hour counter
12	Dynon Double Screens Dynon SkyView SV-D1000
13	Garmin GNS 530W Nav/Com/GPS
14	GPS Garmin 696
15	Garmin Double Screens G3X PFD/MFD
16	Trutrak ADI-instrument to display bank angle, pitch and direction (electronic directional gyro)
17	Garmin GMA 240 audio panel
18	Autopilot Tru Trak Digiflight II

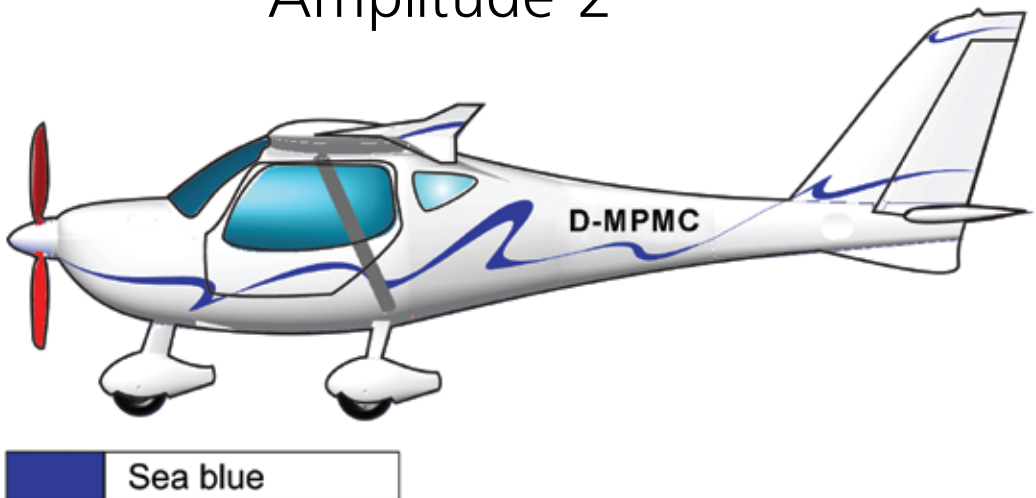


DESIGN

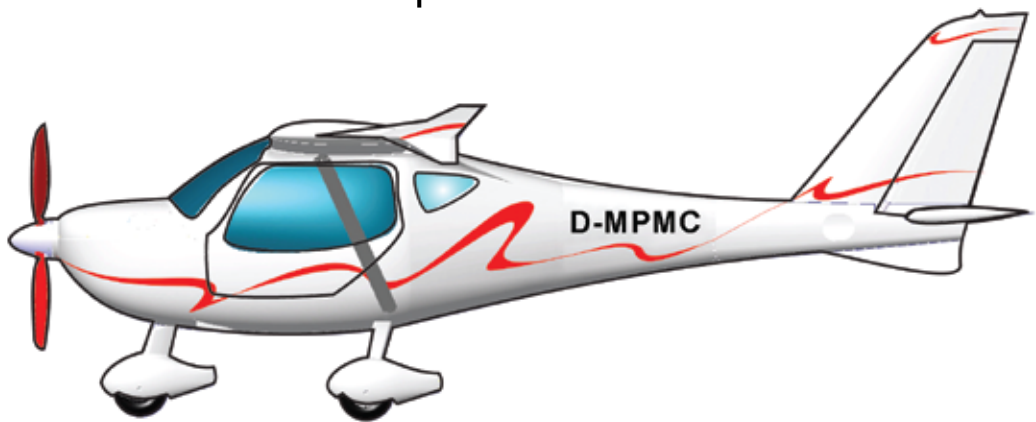
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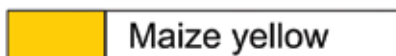
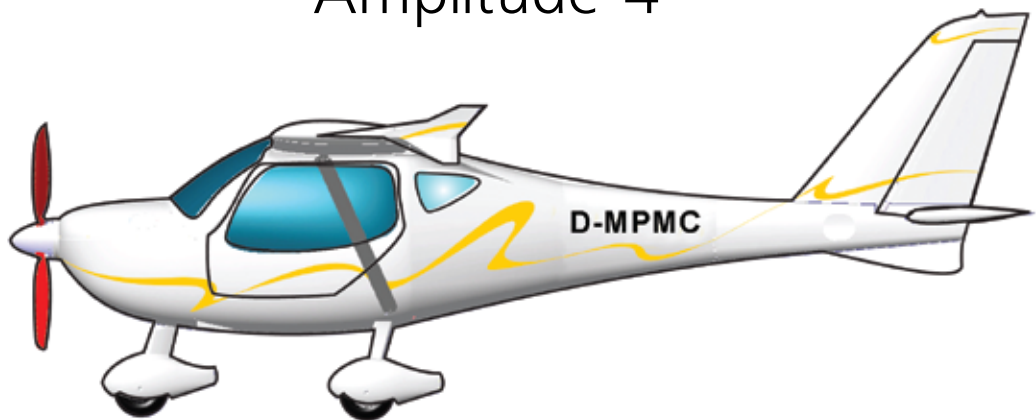
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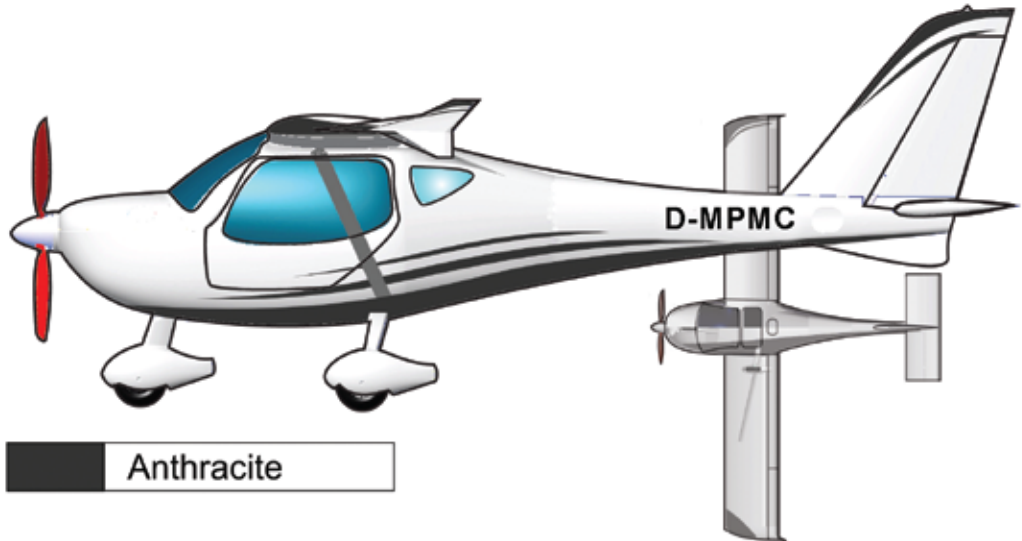
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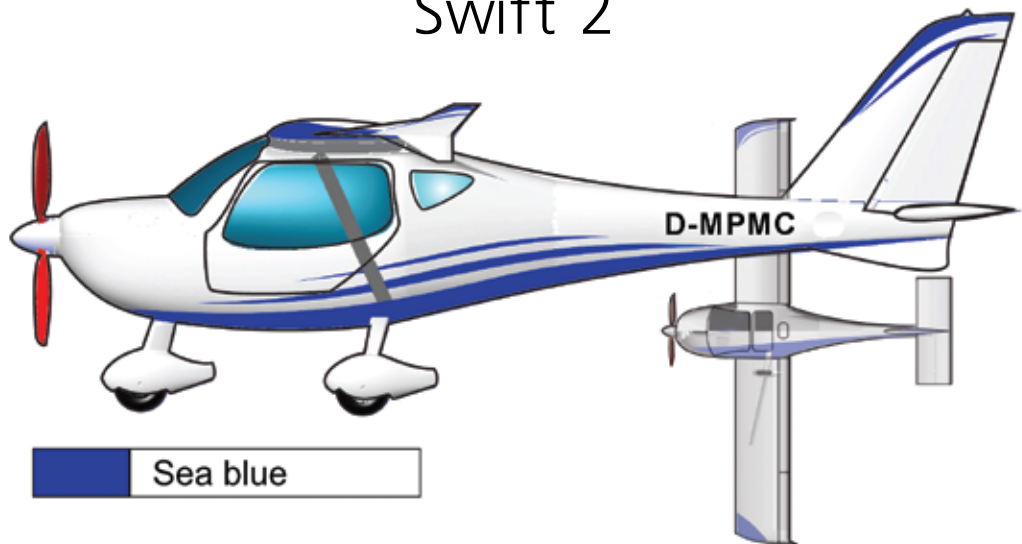
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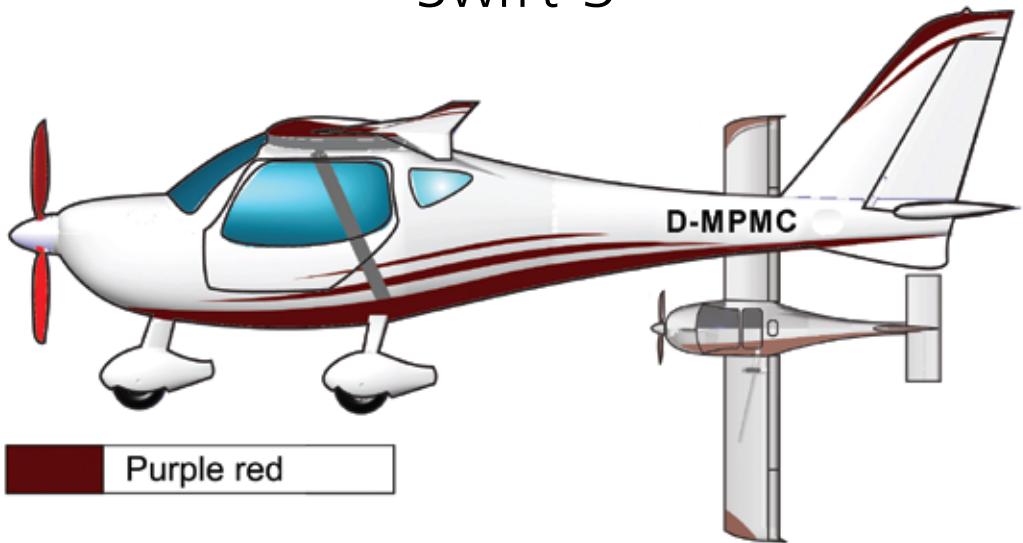
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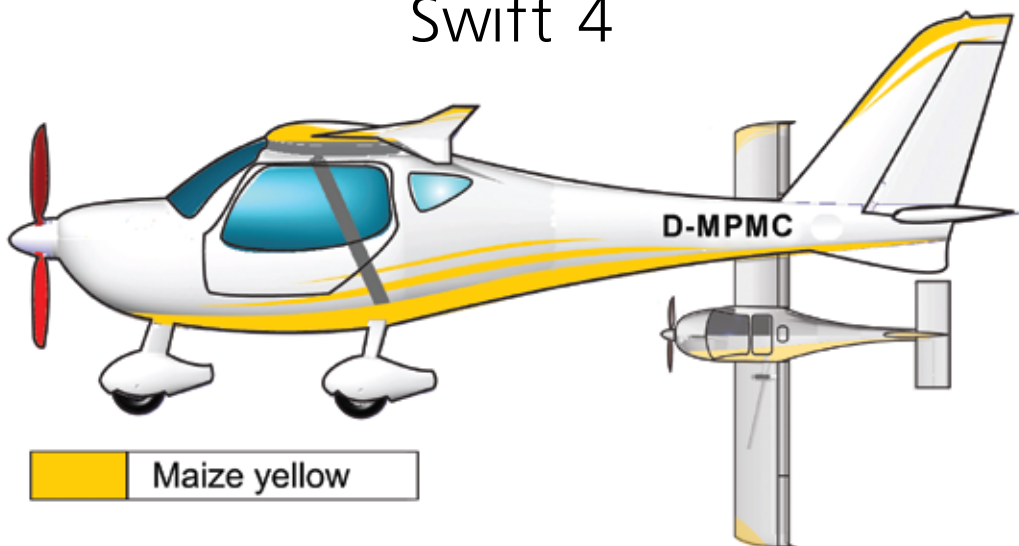
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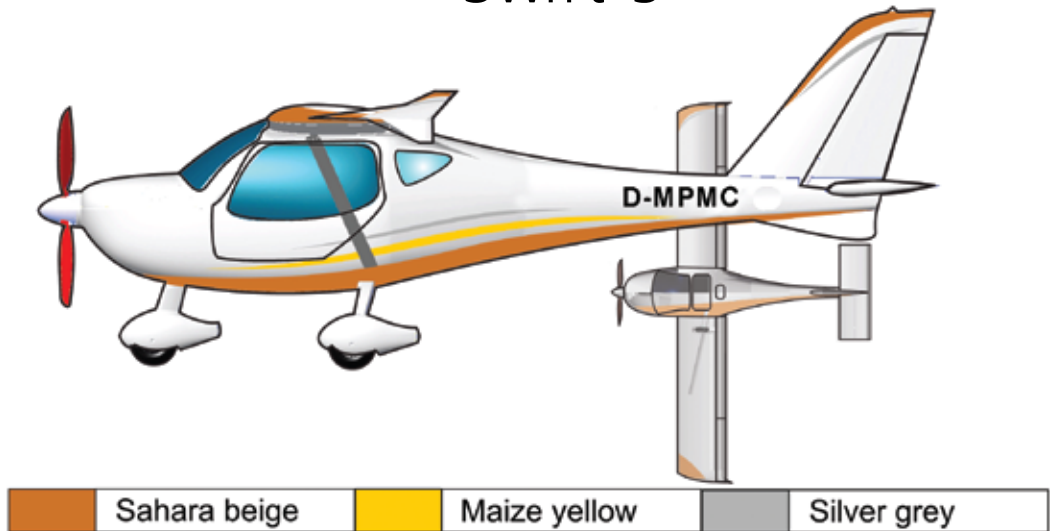
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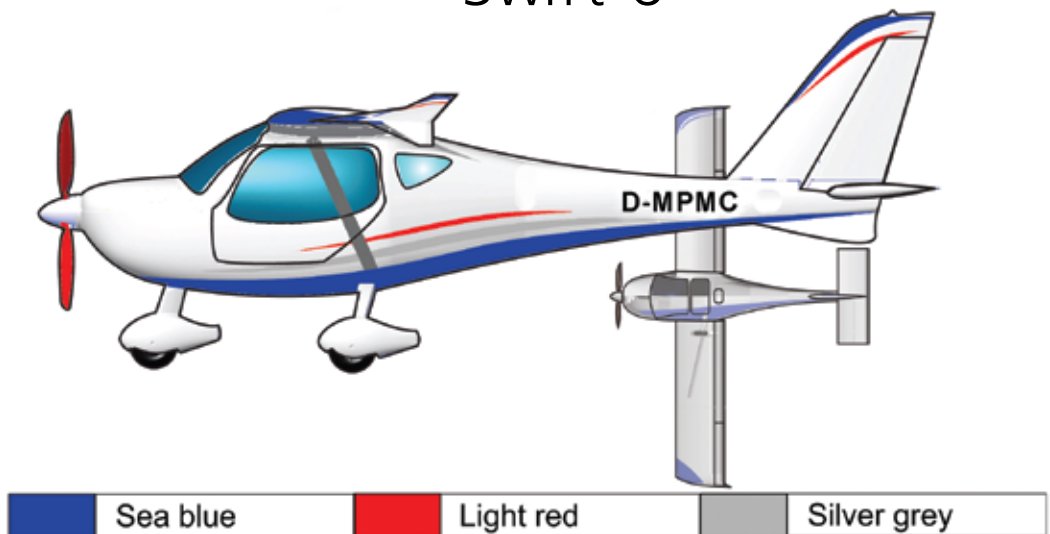
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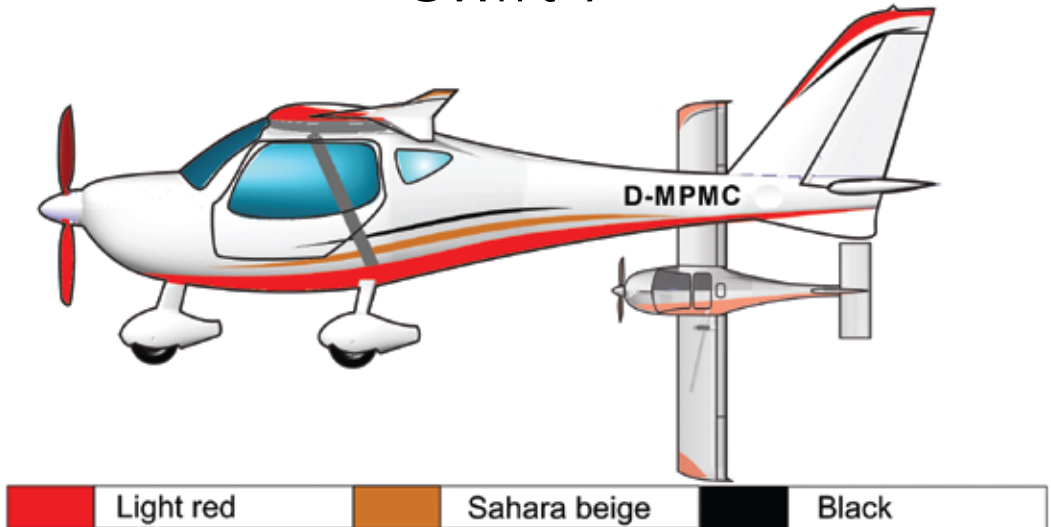
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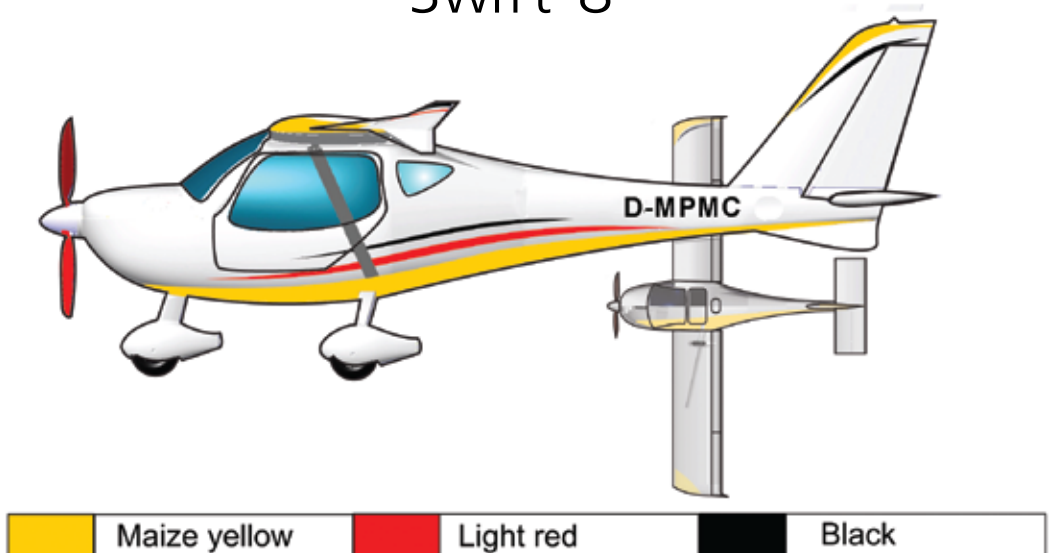
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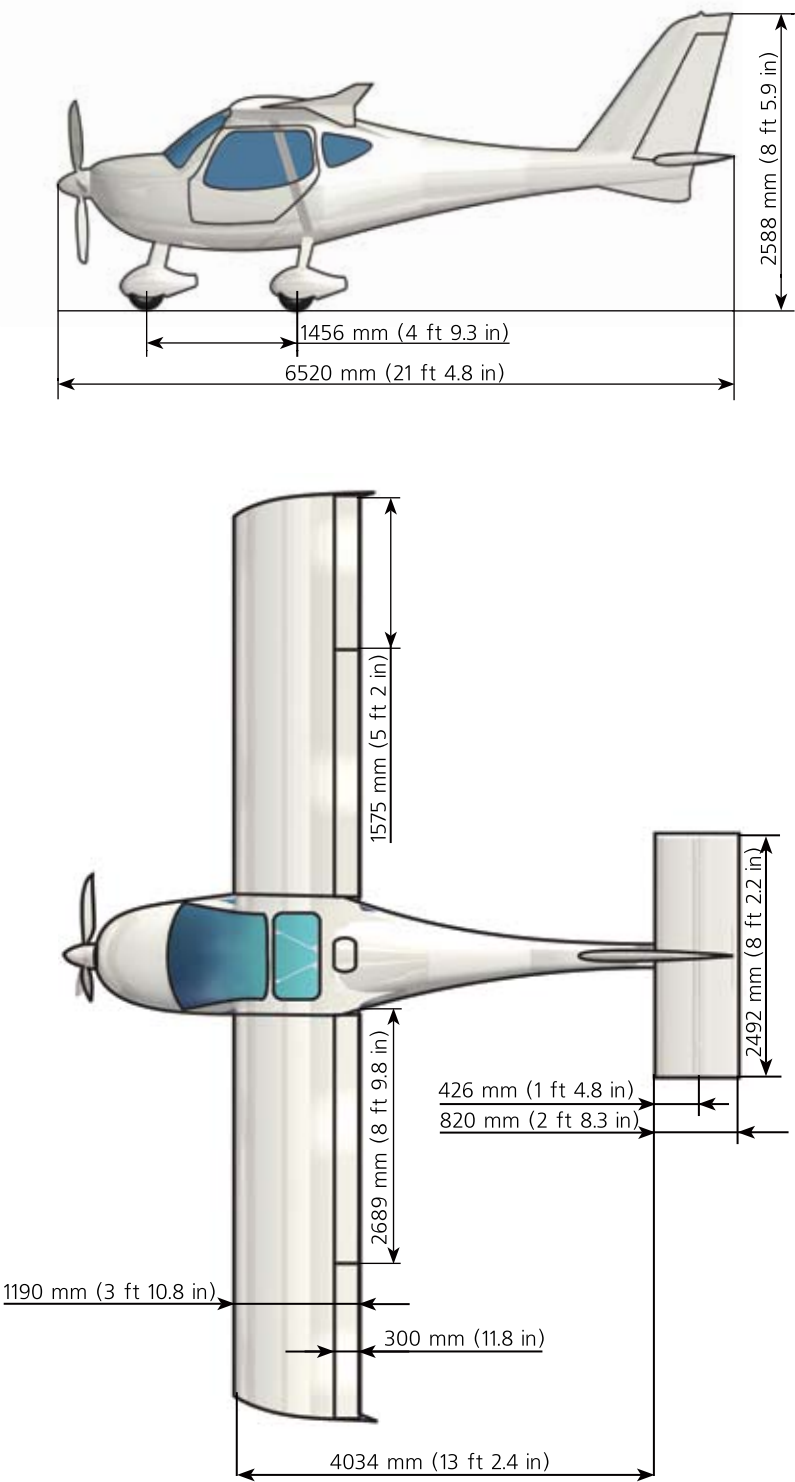
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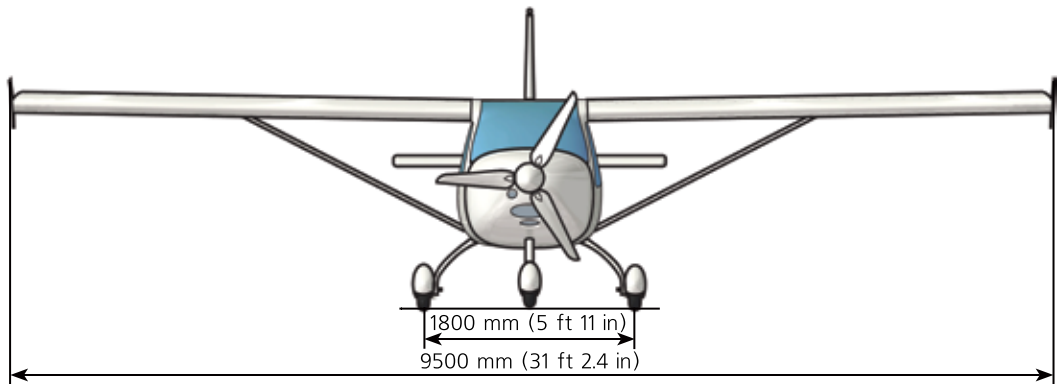


Swift 8



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Geometry		
Max. length	6520 mm	21 ft 4.8 in
Max. height	2588 mm	8 ft 5.9 in
Wing span	9500 mm	31 ft 2.4 in
Areas		
Wing	11.3 m ²	121.60 sq ft
Stabilator	2.04 m ²	21.96 sq ft
Vertical tail	1.55 m ²	16.68 sq ft
Aspect ratios		
Wing	7.94	
Stabilator	3.04	

Performance at MTOW

VH: maximum horizontal speed	220	km\h
VNE: maximum permissible airspeed (red line)	250	km\h
Take-off run	220	m
Take-off distance over 15 m	400	m
Max. range (30 min reserve)	950	km

Weights and Dimentions

typical empty weight (well equipped, incl. rescue system)	360	kg
Max. take off weight	600	kg
Fuel capacity	100	l



FLIGHT DESIGN

FLIGHT DESIGN GMBH

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Edition: December 2009