



THE STORY - INFORMATION - SPECIFICATIONS

09 / 2019

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01



PASSION & PROFESSION



THE STORY

Years ago, Frank Koinzer, an airline pilot and longtime aviator (started flying at the age of 15) was looking for an aircraft to fly into the world's most abandoned backcountry areas like Alaska, South America, and Africa. Specifications on the desired aircraft were quickly noted, JET fuel engine, STOL capabilities, reasonable cruise speed, and a spacious interior cabin.


There was no aircraft available on the market which met Frank's demands in concept, flight characteristics, and quality. Eventually, he started to design the aircraft he always dreamed about. Quickly he was joined by two more aviation enthusiasts, Jirka and Hans, two graduated aircraft and design engineers.

Frank's requirement for design was to comply with FAR23 regulations, even though it is built as an experimental amateur homebuilt. On top of that, Frank is addicted to making sophisticated, detailed work. This was not always easy to achieve. For example, the team had to build a wing, which was solely used for load testing. Together with the University of Prague, that wing was load tested up to 183% of the design load. A huge achievement: the wing surpassed FAR 23 / CS 23 requirements !

Hans, the "head of exterior and interior design", started to create an outstanding cockpit layout and paint scheme. Many friends were following our project, and some of them were so fascinated that they decided to support us by designing and manufacturing parts especially for us.

Our dream became TRUE, by attending AIRVENTURE 2019 at Oshkosh. Breathing the spirit and enthusiasm of experimental aircraft and aviation! We were overwhelmed by a positive and encouraging response of the aviation community in Oshkosh for our  aircraft. By that positive response and many inquiries, we realized a huge demand for an  kit production. The decision was quickly made to turn it from a passion project into a profession.

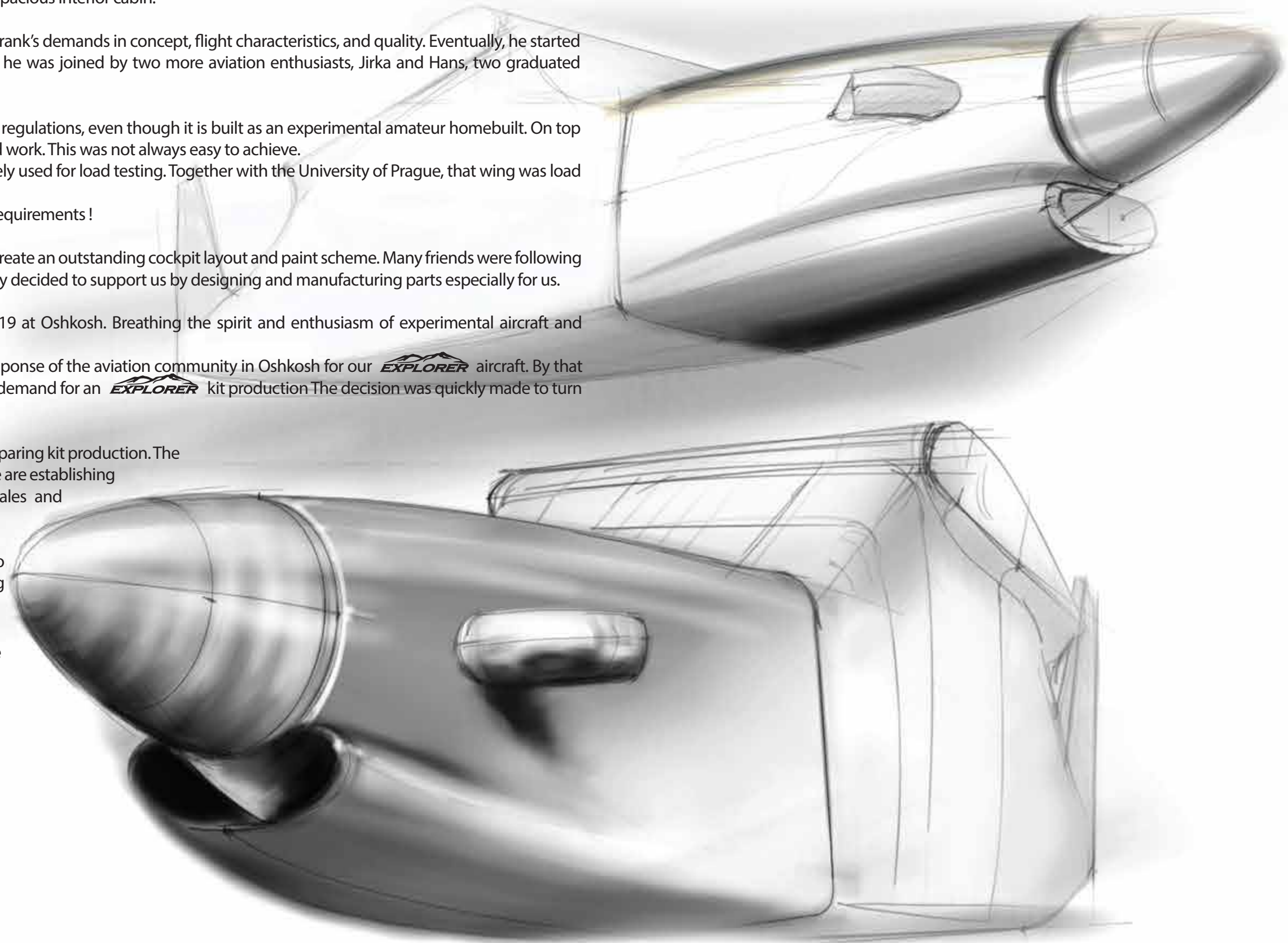
We, the team, together with suppliers and partners are preparing kit production. The first kits will be available by mid-2020, at the same time, we are establishing a builder assist center in the US and building up a sales and customer support organization worldwide.

Our main objective toward  production is to deliver a high-quality aircraft kit together with outstanding builder assistance support..

We promise that every single customer will finalize her/his  project!

We will take care of you!

You will feel and enjoy the new defined freedom of backcountry flying !





COMPANY



NF-AIRCRAFT GmbH

NF-aircraft GmbH is located in the far North of Germany. Founded in 2018 by Frank, together with enthusiasts from the new energy sector. The project and company was immediately recognized by the local industry development agency. They became a strong backup for the start-up. The company holds an own design department and is working closely together with several well established and well-known suppliers.

DIMENSIONS & SPECIFICATIONS

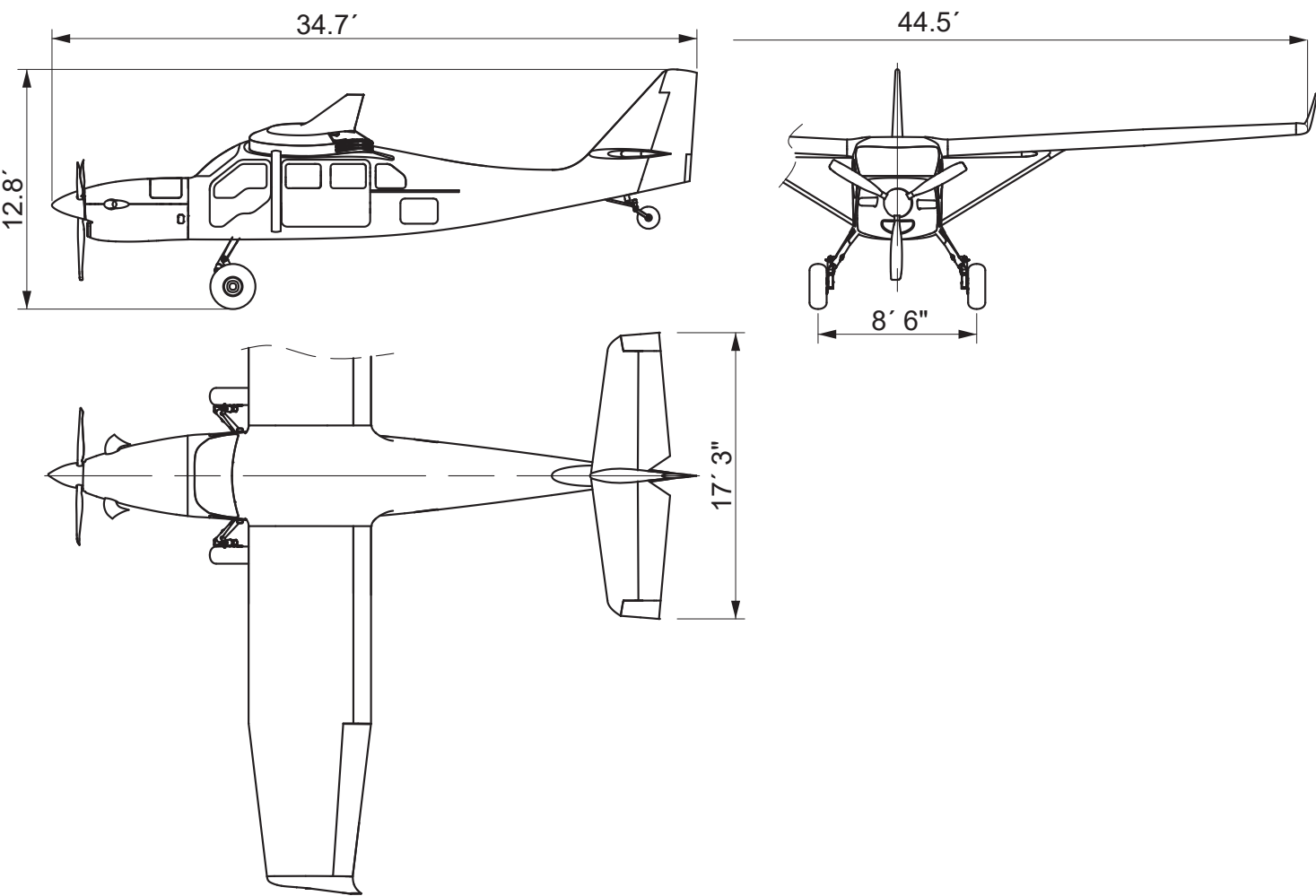
Dimensions & Specifications

Wingspan	13.56 m / 44.5 ft
Overall Length	10.6 m / 34.7 ft
Height (horizontal position)	3.9 m / 12.8 ft
Cabin Width	1.4 m / 4.6 ft
Limit Load Factors (utility)	+ 4.4 g / -1.76 g
Maximum Takeoff Weight	2900 kg / 6400 lbs
Empty Weight *	1500 kg / 3307 lbs
Max load *	1400 kg / 3086 lbs
Fuel Tanks Volume **	2x 410 l / 2x 108 US gal
Takeoff Distance at max. Takeoff Weight	330m / 1000 ft
Endurance	5h + 45m reserve
Range	800 NM + reserve
Engine	Pratt&Whitney Canada PT6A-27 / 680 shp

Performance

Max Cruise Speed (TAS/18000ft) ***	190 mph @ 36 USG 305 km/h, 165 kts
Economy Cruise Speed (TAS/18000ft) ***	178 mph @ 33 USG 287 km/h, 155 kts
Stall Speed (clean configuration) ***	73 mph, 118 km/h, 64 kts
Stall Speed (landing configuration) ***	55 mph, 89 km/h, 48 kts

* depending on cabin layout ** can be adjusted *** proved by flight testing



CONSTRUCTION



A rugged and durable all-composite airframe makes the **EXPLORER** a life-long investment. The fiberglass skin is easy to build and the most convenient structure for field repair.

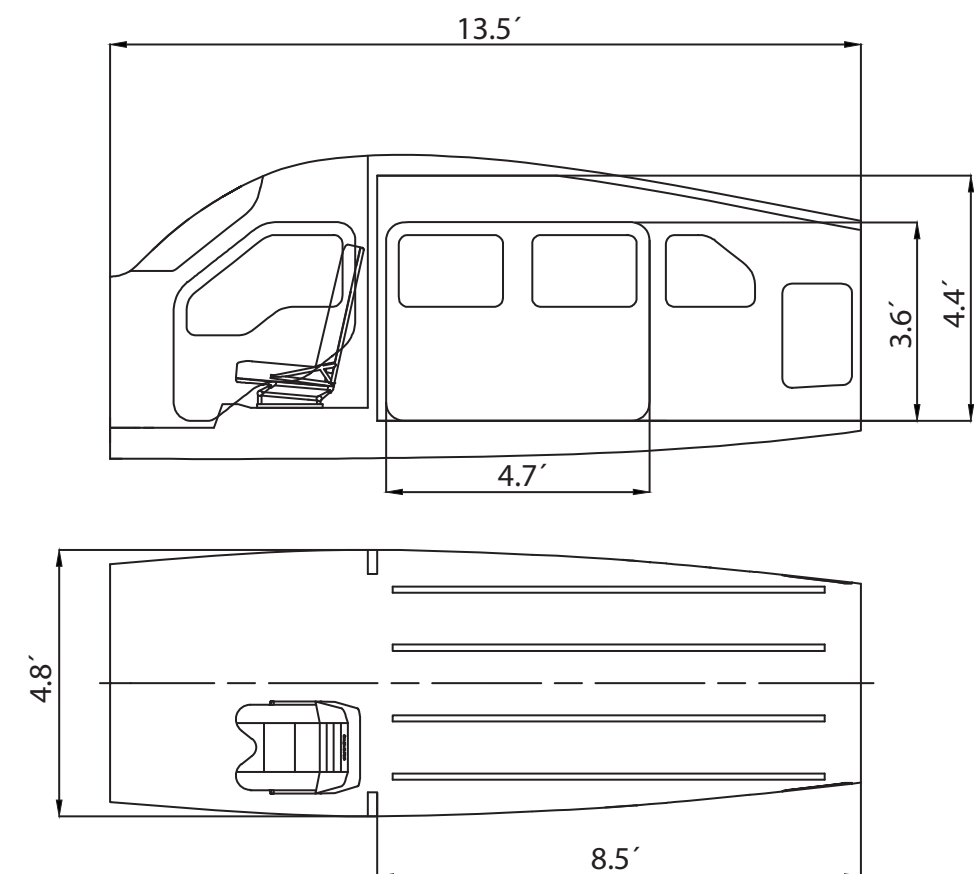
Tail-dragger configuration will bring you to the roughest landing strips you can think about. With high propeller clearance and without a fragile nose wheel undercarriage, you have a reliable and fun to fly backcountry tool.

Even the roughest landing areas will not shake the airframe as the two large air-oil dampers on the main landing gear legs will absorb the shocks. A brake caliper machined out of a single aluminum block is housing four titanium pistons that will reduce your landing roll dramatically.

The brake system is one of the outstanding custom made parts of **EXPLORER** to guarantee long term trouble-free operation, even in the most challenging environmental conditions.

All metal parts are protected by either 2k priming or plating before a tough external paint is applied. Our first choice was to use advanced non-corroding hardware on most locations.

Loading and boarding are easy through two huge sliding doors, a baggage door, and two large pilot doors. An all flat cargo floor with four standard seat tracks gives you all opportunities for load requirements.



TECHNICAL INFORMATION

ENGINE

No compromise on the power plant! **EXPLORER** is powered by the most reliable engine on the market. A Pratt & Whitney PT6A-27 will give you the power to operate the aircraft safe, reliable and economic throughout the entire operating envelope.

PROPELLER

Two propeller options are available:
Three blade metal AVIA 508H/106, diameter 106 inch.
Four blade wood/composite MTV16, diameter 98 inch.

WING

EXPLORER has a high lift wing with huge fowler flaps. The clean composite surface creates as little drag as possible. An integral fuel cell protected by the main spar is located in each wing. The capacity can be chosen by the builder. Due to an outstanding design **EXPLORER** is the aircraft with the widest speed range in its class.

LANDING GEAR

A masterpiece of aeromechanical engineering is the sleek and clean landing gear. Two large air/oil shock absorbers make landings even on the roughest terrain convenient. Two four titanium piston brake calipers ensure minimum ground roll. Good accessibility and durable components keep daily visual inspection and maintenance costs to a minimum.



INTERIOR

DESIGN

Inspired by nature, fluent lines, edges and colors prevail throughout the interior. High quality materials and well positioned interfaces make the flight deck a cozy and highly functional place.

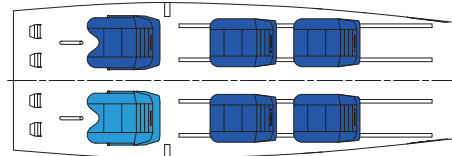
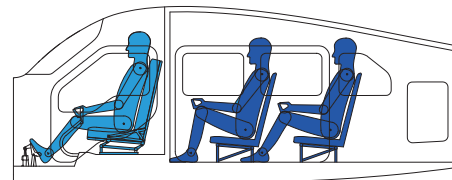
AVIONICS

A sophisticated GARMIN avionics system makes navigation, situational awareness and communication convenient and easy. The heart of the system are two 10" G3X TOUCH displays, connected to the capable GTN750/GTN650 COM/NAV system gives you full IFR capability. Workload reduction brings you a fully digital GARMIN autopilot. A GARMIN G5 is your back up instrument with all features for a safe landing.

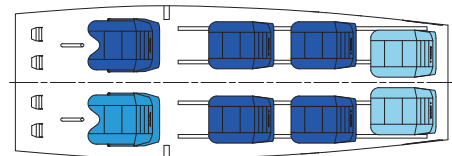
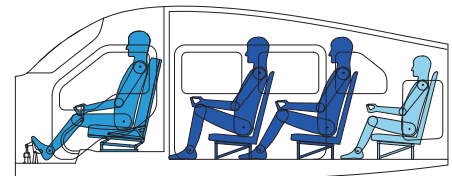


CONFIGURATIONS

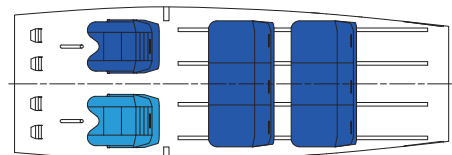
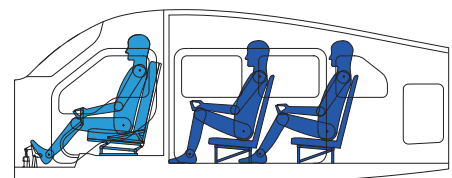
5 PASSENGERS LUXURY VERSION



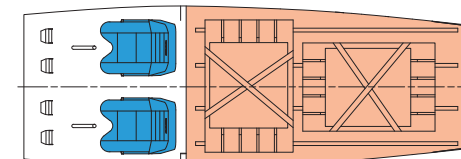
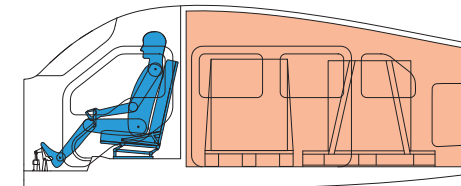
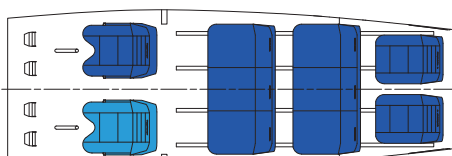
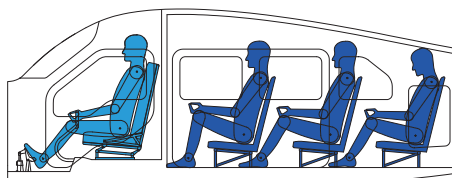
5+2 PASSENGERS FAMILY WITH CHILDREN



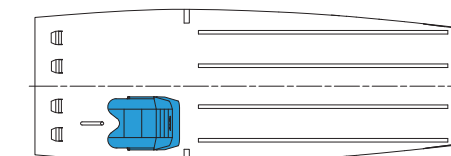
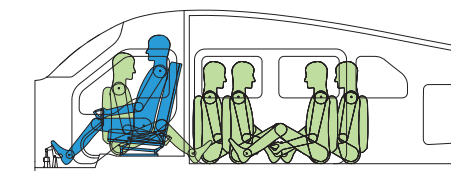
7 PASSENGERS ECONOMY CLASS



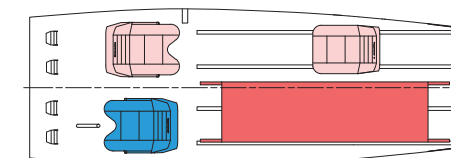
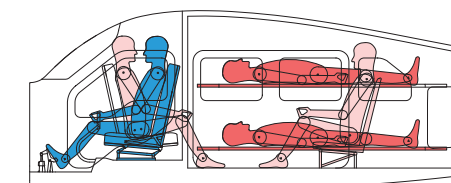
9 PASSENGERS ECONOMY CLASS



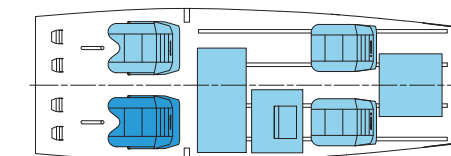
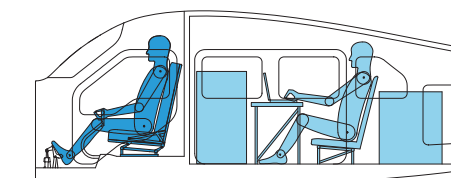
CARGO LOGISTICS



10 SKYDIVERS SPORT & FUN



MEDICAL RESCUE & MISSIONARY



SPECIAL MISSIONS SURVEILLANCE & PHOTOGRAPHY

OPTIONS

EXTENDED BAGGAGE

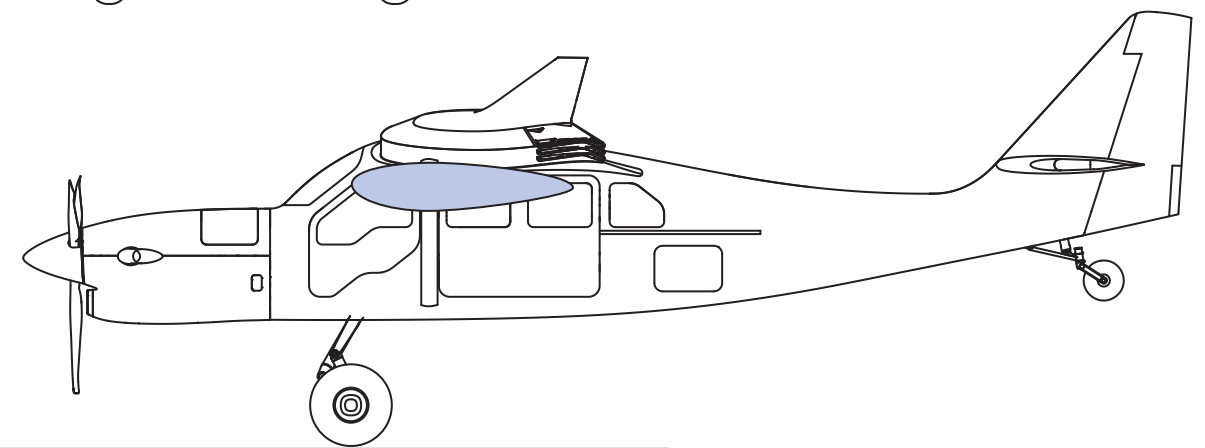
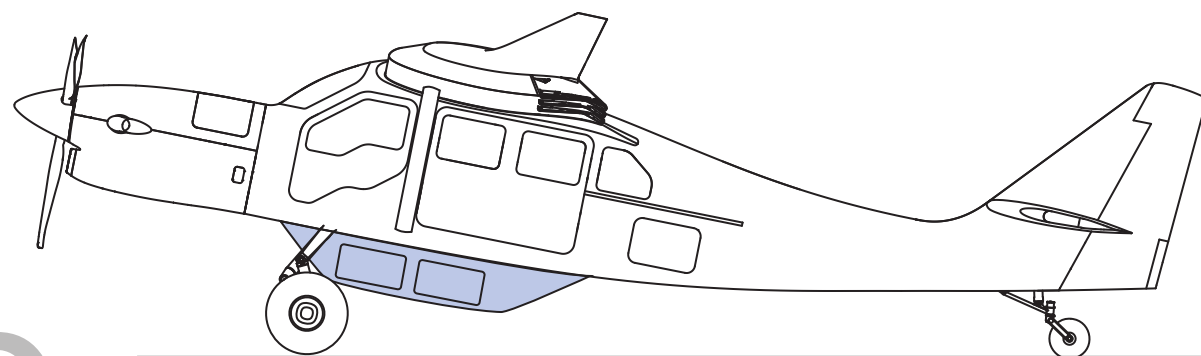
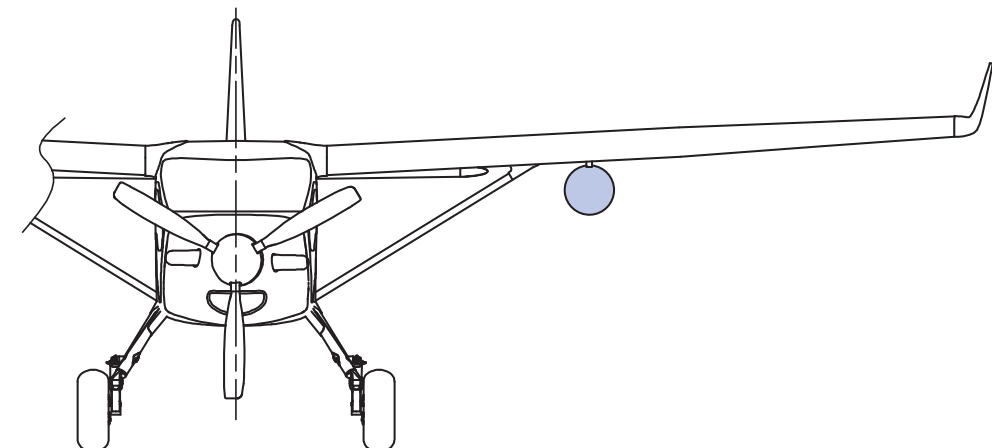
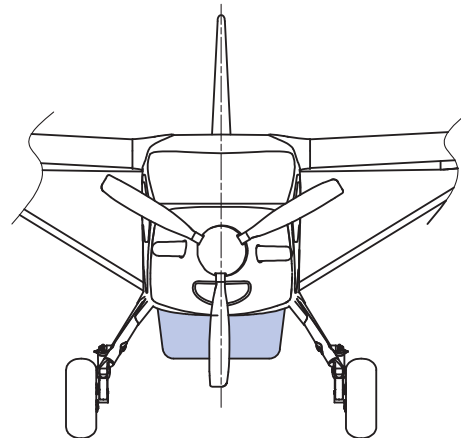
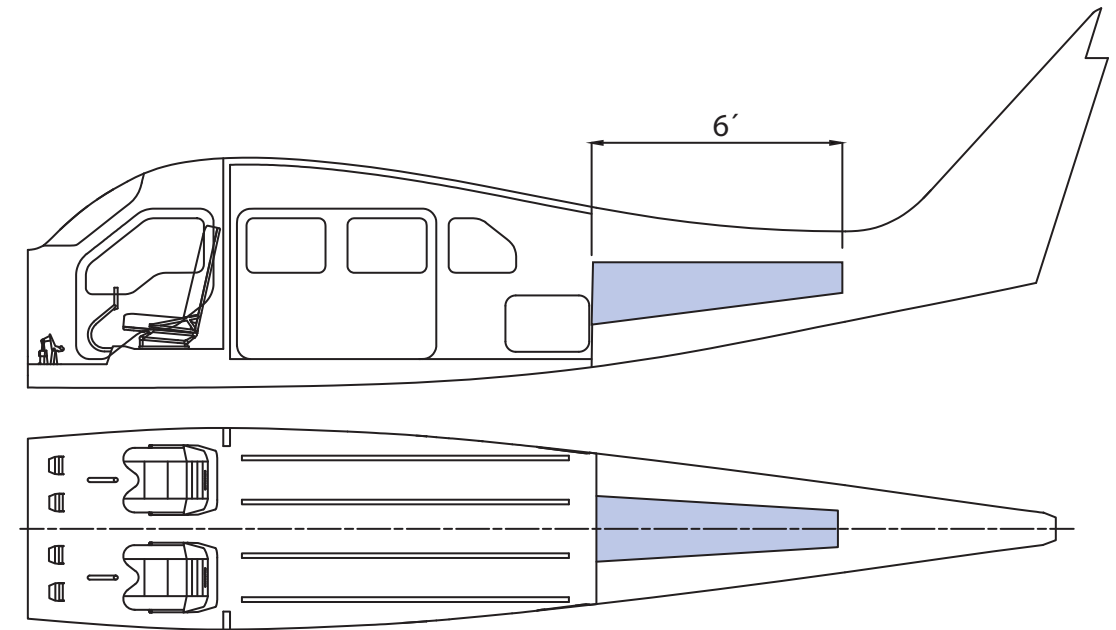
Skis, fishing rods or other light and long stuff will find space in the Extended Baggage compartment easily accessed by the main cabin.

BELLY POD

Need more room ?
An all composite, lightweight cargo pod gives you up to 50 cubic feet more space.

UNDERWING FUEL TANKS

Two easy to install underwing fuel tanks will increase fuel capacity by 105 USG/ 400 liters.



ELOATS

SEAPLANE

A seaplane version of **EXPLORER** will even further expand your territory of exploration. Straight and amphibian floats will be available. As we are working closely together with renowned float manufacturers. Our focus on the floats is similar as for the whole aircraft, using as many non-corroding parts as possible and to have a low maintenance airframe even in salt water operation. **EXPLORER**'s high strength and durable composite airframe incorporates already all reinforcements for float installation, no need for expensive upgrades for a later conversion.





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