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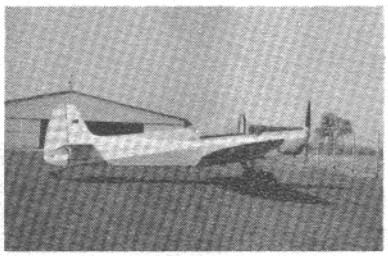

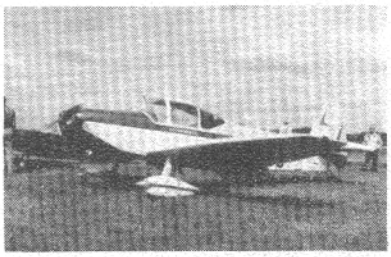

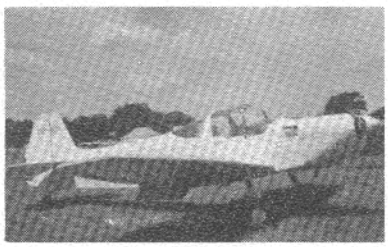

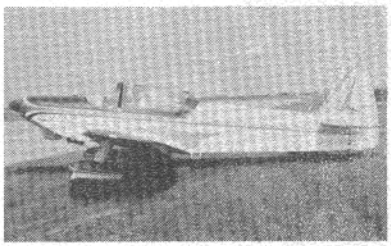

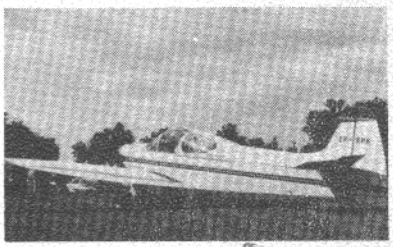

If you want . . . . . .

- a luxurious two seater
- roomy cockpit
- good range
- superb and safe flying qualities
- beauty and speed

. . . Then the EMERAUDE is for you.

All wood construction - flaps - big cockpit - simple structure - very detailed plans - seats 2 side by side - room for radio & baggage - uses synthetic resin glue - plastic resin coated structure & synthetic fabric & finish for lifetime maintenance-free service.

PIEL EMERAUDE

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INTRODUCTION . . .

The Emeraude - synonymous with beauty - a jewel of an airplane! It has all that is needed in a homebuilt plane - construction ease, performance, style, comfortable and spacious cockpit - these were Claude Piel's basic specifications when he created his outstandingly successful Emeraude.

Undoubtedly one of the most beautiful designs available for amateur construction, the Piel Emeraude is fast becoming one of the most popular aircraft in its class.

The prototype CP 30 Emeraude first flew in 1954. It was powered with a 65 HP Continental. Plans were drawn up and made available to amateur builders in France. Later Piel developed the CP 301 which although basically the same aircraft, was powered with the Continental C-90. This model is slightly beefed up to take the extra stresses. Flaps were added and later models came out with sliding blown canopy. Airfoil used is the NACA 23012. When amateur built, the Emeraude is licensable in U.S. or Canada in the appropriate home built aircraft category.

The Emeraude's excellent flying characteristics, spacious cabin (42" inside width) and fine performance has rapidly advanced its popularity with aircraft manufacturers. In France it has been produced by the SCANOR factory in Abbeville, Ateliers Aéronautiques de la Cote d'Emeraude, S. O. C. A., and Scintex Aviation. In Spain, the Emeraude is produced by Aeronasa. Garland-Bianchi undertook the production for Great Britain but called their 90 HP Emeraude the "Linnet". In South Africa an Emeraude version was made and called the Genair "Aeriel Mk II".

Controls of the Emeraude are described as light and responsive, although not too sensitive as with some ultra lights. Control pressures are well balanced making the ship a delight to fly. Flaps are very effective and being interconnected with elevator trim, stick pressure is automatically compensated for while flaps are being extended or retracted. The wide tread undercarriage provides good stability on the ground for take-off, landing, and taxiing.

At the stall, full aileron control is maintained without the use of rudder. With full flaps, this airplane has amazing short field characteristics. Because of this most important range of control, the Emeraude can be considered one of the safest and most versatile aircraft in its class.

The clean lines lend to good cruise speed and ample range. Provision is made for a ten gallon spare fuel tank for range up to 720 miles.

The Emeraude is one of our most popular designs. Several beautiful examples have been completed. The best of these is a CP 105A built by Wayne Barton of Rush, New York. His Smeraude has repeatedly won high awards at the annual Experimental Aircraft Association Fly-in at Rockford, Illinois. Georges Beraud, Executive of the R.S.A. in France (French counterpart of E.A.A.) had a flight with Wayne Barton. He remarked that this was the finest Emeraude he has seen or flown.

The first Emeraude to fly in North America was that built by Dennis Crawford of Oshawa, Ontario. His aircraft is also a fine example of this type. Another very nice Emeraude has been built by Frank Spoler of Elyria, Ohio. Many more Emeraudes are being completed and flown each year.

Incidentally Wayne Barton's C-85 powered Emeraude cruises at 120 mph. It is equipped with metal propeller and wheel pants.

CP 30

CP 304

You can build an airplane like this! Wayne F. Barton built this Emeraude for $1200.00 and two years spare time.

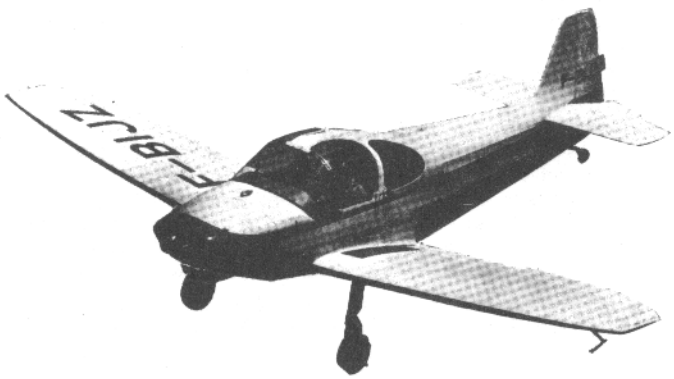
PLANS . . .

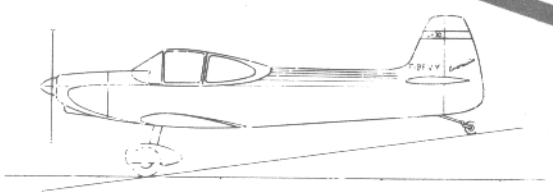
A set of plans consists of 30 large dri-prints in ten groups, each plan with its own material list. We have considerably consolidated and clarified the plans from the original mass of 130 production drawings. The entire construction is covered in considerable detail. For instance, there is a plan showing a full size layout of the instrument panel. Other plans show the detailed construction of a hydraulic brake assembly and wheel. The plans are translated to English. Material specifications are all converted to American standards. A separate general material list is provided for the entire aircraft.

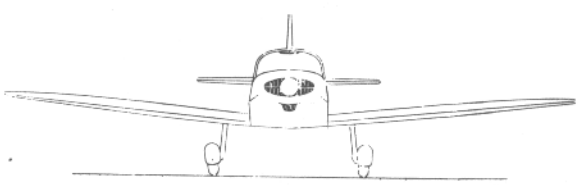
All dimensions have been left in a neat metric system in which the aircraft was designed. The change into the inch system with all its antique and cumbersome fractions would be inviting errors and trouble. Those not familiar with the metric system will find it very easy to learn and use. It does not take long to appreciate the speed and simplicity that this system offers. Builders should buy themselves only two or three metric measuring tools – a tape measure, a steel rule and, if desired, a vernier caliper. Metric tools are available at a very reasonable price from Falconar Aircraft Ltd.

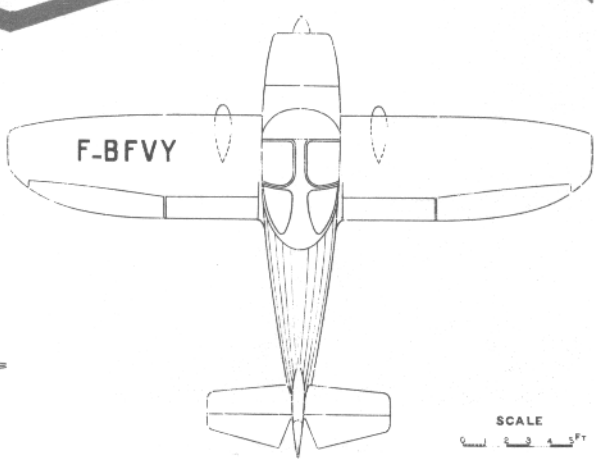
The basic set of plans are for the CP 30 model. However, all modifications for the installation of larger engines and the CP 300 series version are shown. In some cases CP 301A plans are included where they have replaced the older CP 30 plans. Other CP 30 plans have the CP 301A modifications noted on them.

Supplemental plans are introduced from time to time for optional extras. These are listed on the current plans price list.









SCALE

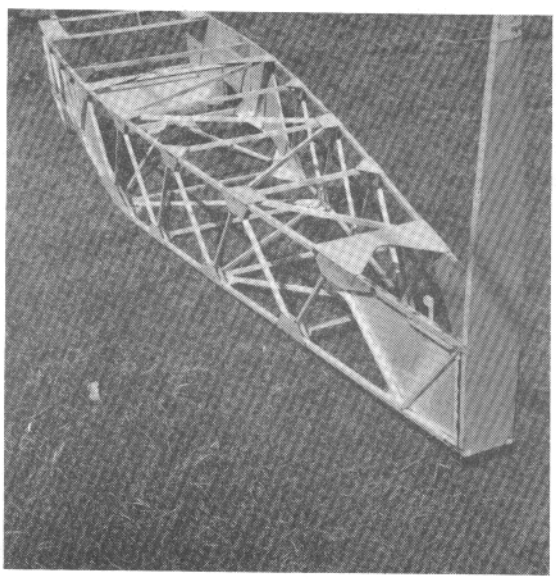
CONSTRUCTION . . .

The Emeraude has been designed to be built from Sitka spruce and okoumé mahogany plywood. Poplar ply, Phillipine or Honduras-mahogany plywood can be used instead if desired. Birch plywood, one size thinner, can also be substituted. Aircraft using the Lycoming 0-290 engine are often constructed using birch plywood in the same thickness as originally specified for okoumé mahogany plywood. A few highly stressed areas specify the use of ash wood and birch plywood. Many fittings use aluminum alloy 24ST and 65ST. Most welded steel fittings specify 4130 steel for the highly stressed parts and mild steel 1020 for other parts. All hardware specified is AN standard. To sum up there is no procurement problem for any materials.

Fuselage ..

The fuselage structure is of the truss type reinforced with ply gussets. Cockpit sides have sheet plywood on the inside. The basic assembly consists of 2 built-up sides assembled with bulkheads and formers between. It is built very similarly to a model airplane. While the fuselage is being assembled, temporary cross pieces hold the sides in the correct relationship until gussets and skins are installed. Some builders prefer to build up bulkheads during fuselage assembly.

The firewall bulkhead is assembled during the assembly of the sides. Bulkhead 1 is made mostly of ash wood and is located so that the wing will mount to it. Bulkhead 2 is the seat back and the widest part of the fuselage. The number 3 bulkhead is at the tail and serves to support the tailwheel spring. At the very end is the fin spar. The fin is integral with the fuselage and is ply covered. The top of the fuselage in front of the instrument panel location is entirely plywood covered as is the floor. Behind the cabin on top is the turtleback assembly of 3/8" plywood formers and stringers. Stringers are also placed on the bottom of the fuselage and on each side. This assures a smooth fabric finish and contributes to the beauty and performance of the aircraft. The windshield arch of 4130 steel tube secures the 1/8" plexiglass windshield. The standard cabin consists of a narrow cabin roof and 2 windows above the baggage compartment and 2 doors for entry and exit. Alternately a sliding bubble canopy assembly can be installed. A supplemental plan details its construction.



Fuselage Frame

A good and safe feature of the cockpit area is its obvious strength. In the event of a crash the occupants are well protected - the engine in the front, the wing below and very little behind or above to move forward and hurt the occupants.

Tail ..

The stabilizer consists of the heavy leading edge and a strong main spar with nine plywood ribs. Top and bottom of the stabilizer are entirely plywood covered. Four bolts attach it to aluminum alloy angles at the rear of the fuselage.

The elevators are assembled using a full span spar and diagonal ribs and gussets. The rudder is of similar construction to the elevators. All tail surfaces are, therefore, simple in their construction and easy to complete.