

Pander D Classic Plane Models resin

Sportsplane

Scale 1:72

The single seat, single engine Pander D has been built by the Pander furniture factory in the Hague. The design was based on the Holland H-2, designed by the Vliegtuig Industrie Holland (V.I.H.). The aircraft made its maiden flight in November 1924. Two copies of the Pander D have been exhibited on the Salon de l'Aéronautique in Paris in December 1924, the prototype H-NACM and the first series aircraft H-NACO. The aircraft were much appreciated, for their flight characteristics, as well as the quality of their finishing.



The H-NACM stayed in France until February 1925, where many demonstrations were given. After a short stay in the Netherlands it returned to Farnce in July to participate in a number of touring races. In the end it stayed definitely in France as a demonstration aircraft for a possible licence production by Roques-Lefolcalvez, which did not materialize. Its final fate is unknown.

The Pander D was offered for £ 450 in 1925 (in today's money €30,186), which was considered to be a reasonable price in view of the high quality of the aircraft. However, only eleven Pander D's have been built in total; two aircraft have been used by the Dutch Naval services and two by the Dutch East Indies army air department. The aircraft has ultimately been sold to Spain, Latvia, France and the Netherlands.

Classic Plane has produced two variants of the kit: one for the two "military" versions and one for the civilian version, the only difference being the box cover and the decal sheet.



our and black and white photographs of the finished models and the original and a A4 sheet with a short



The kit comes in a carton box and contains a plastic bag with the resin parts and one with the decal sheet and the transparent windshield, an A4 sheet with col-



history and technical details and summary instructions.

I am going to build the prototype, the H-NACM.

There are many books and magazines containing information on the Pander D. Hazewinkel (ref. 5), Hooftman (ref. 11), and Wesselink & Postma (ref. 16) contain a dimensioned drawings of the aircraft and most others list the dimensions of the aircraft; all contain many photographs. References 5 and 9 make a distinction between different versions of the Pander D (DA through DF and DS). I have also used two building reports on the Modelbrouwers forum, listed as references 17 and 18. Reference 18 describes the scratch build of the two Pander D models that served later as masters for the kit, while the build of the kit (the H-NACO) is described in reference 17. Articles in the Flight Archive show some production details of the original aircraft that may be useful for detailing the model.

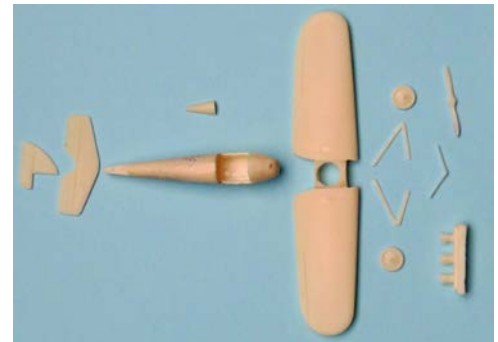


| | <i>Pander D</i> | <i>1:72</i> | <i>model</i> |
|---------------|-----------------|-------------|-----------------|
| <i>Span</i> | 8.00 m | 111.1 mm | 112.1 mm (101%) |
| <i>Length</i> | 4.95 m | 68.8 mm | 71.8 mm (104%) |
| <i>Height</i> | 1.65 m | 22.9 mm | 24.0 mm (105%) |
| <i>Engine</i> | Anzani of 25 hp | | |
| <i>Crew</i> | 1 | | |

All dimensions are reasonably to scale.

Parts

I have cleaned the parts. The fuselage had quite some air bubbles, which I have filled with Tamyia putty. The propeller was missing one tip, which I have modelled again from Revell putty, which attaches better to the resin. The streamlined head rest will need an analogous treatment. The engine cylinders are far too big for the small Azani engine, and need to be replaced. Apparently my kit was made with another set of moulds than some other kits that I have seen; one part was missing, but apparently not needed, and the configuration on the sprues was different.



I have separated the rudder, elevator and ailerons from tail planes and wing with a razor saw, and have repaired the air bubbles on some of the components.

Fuselage

I have enlarged the cockpit space in the fuselage, first drilling holes around the edges, then removing the remaining material with knife and milling.

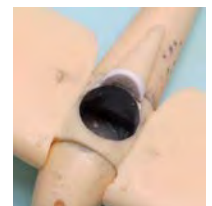


I also redid the panel lines, as engraved on the model. That was not correct, for according to ref. 19 the panel lines of the H-NACM and H-NACO were not visible and could even not be felt. There were, however,

vertical metal bands around the lower fuselage to distribute the landing forces over the fuselage at the location of the front and rear attachment of the landing gear V-strut. So I have closed the horizontal panel lines with cyanoacrylate glue.



To remove the gap between the cockpit walls and the underside of the wing I have glued 0.25 mm strips on the top of the side walls and sanded these until the top surface of wing and fuselage fitted well. The inside of the cockpit has been painted light grey.



The head rest was not long enough; it did not reach the cockpit opening. I have glued a piece of styrene to the front side of it and have filed the same curvature in it as the cockpit opening has.

Pictures show that under the nose two small exhaust pipes are visible. In the kit these are modelled as superficial holes. I have inserted small pieces of 0.5 x 0.3 mm brass tube in them. Also, I have carved some slits on the left and right top side of the nose, which serve the cooling of the engine cylinders.



Wing

I had cleaned the round opening in the wing nicely until it had a horseshoe shape. This was not correct, the cockpit opening is purely circular. I have filled the rear corners with pieces of styrene and filed and sanded that in the correct shape. When dry fitting the wing either the wing was lying too deep, or a gap was left between fuselage and wing underside. I have corrected that by gluing a 0.25 mm thick strip on the top edge of the cockpit cavity in the fuselage and sanding that until a perfect fit of the top surface of wing and fuselage was achieved.



Tail planes

I have glued the stabilizer to the fuselage, aligning it well to the dry fitted wing. The joint with the fuselage top needed some putty. The elevator halves stay connected in the middle.



Next I have glued the fin, well perpendicular to the stabilizer. The hinge line of the rudder was slightly longer than the distance between top of the fin and fuselage underside, so I have added some length to the fin.



Engine and propeller

I have made new cylinders from 0.8 mm styrene rod wound with 0.2 mm metal wire. The holes in the nose have been widened to 1.4 mm.



The small, curved engine exhausts are mounted directly on the cylinders. I have modelled these with small pieces of solder of 0.5 mm diameter.



I have glued the cylinders in the holes in the nose, but found out later that the exhausts were pointing to the front. Luckily I could remove the cylinders again with only minor damage, but the exhausts were lost in the process. So I produced new ones, glued them to the cylinders and mounted these again in the nose.



After repair of the propeller tip I have thinned the blades a bit and have mounted a 0.6 mm rod to it, which fitted in the hole I had drilled in the nose. I have painted the propeller natural wood and have brushed it lightly with Vallejo Model Air mahogany. I have used a left over from red-white-blue decals I had printed for the Fokker F.XX to make the skewed flags on the propeller tips.



Cockpit



No cockpit details are included in the kit. I was planning to use an Aeroclub Models white metal seat for the model, but in the end have borrowed a seat from a Fokker V.23 kit of Omega Models, and have kept the white metal seat as a master for a number of resin copies I will use for other models. I have painted the back rest of the seat dark grey, the seat bottom leather.

The rudder pedals have been made from a piece of strip and 0.4 mm brass wire, the control stick from 0.5 and 0.6 mm styrene rod. They all have been painted dark grey. I have made the instrument panel from 0.25 mm plastic, which I have painted dark grey. The instrument dials are minute decals from Mike Grant Decals, which are rather fragile, even with an extra coat of Microscale liquid Decal Film, and difficult to cut out. Their quality is mediocre, but on scale 1:1 that is difficult to see.



I have dry fitted a pilot in the cockpit. Although the proportions are correct, I have decided not to mount it, as then no details would be visible of the cockpit interior. Also, the pilot figure I had was wearing WW II equipment, badly



fitting in an early twenties aircraft.

I have glued the seat on a piece of 2 mm thick strip to get it at the desired height and have glued rudder pedals, stick and seat in the cockpit. The seat belts I have taken from an Eduard PE set. The instrument panel has been glued on the rear side of the front wing spar. Closing the fuselage leaves just enough of the cockpit details visible.



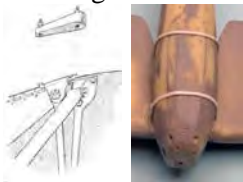
The leather covering of the edge of the cockpit opening and the head rest I have modelled from 0.5 mm diameter solder, gluing it bit by bit to the edge. I had to cover the edges in two parts to get the sharp bend in it between cockpit and head rest.



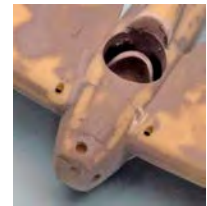
Wing assembly

I have glued the wing to the fuselage and have given the model a coat of grey primer. This showed many "hidden" air bubbles, which led to an extensive treatment with putty followed by thorough sanding. I have profited of the occasion by also assembling the headrest, which also needed putty for the joints with the fuselage and the missing back part.

I have drilled a 0.9 mm hole in the centre of the two small air scoops on the top surface of the wing. In these I have mounted two pieces of brass 0.7 x 0.9 mm tubes, which models the scoops better.



Another modification has been to model the two steel belts, which distributed the lift and landing forces over the wooden fuselage surface. I have modelled these by strips of 0.25 x 0.5 mm at the place where the undercarriage V-styles are attached to the fuselage.

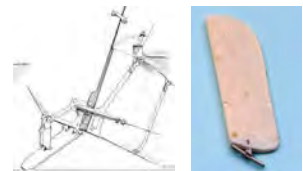


Undercarriage

The drawing from Flight shows clearly that the tail skid was mounted on the rudder and moved with it. I have modelled the tail skid with a piece of metal strip and some styrene rod and glued it under the rudder.



I have used the main undercarriage V-struts supplied with the kit. The hinged axle did not fit to the V-struts, and I have replaced it by an axle made from 0.5 mm brass wire. This made a sturdy support for the model.



Painting

I have painted the model ivory all over. Only later in observing the photographs carefully, I noticed that the lower half on the nose cowling probably was untreated aluminium. With the undercarriage already mounted it was impossible to correct this. I have painted the wheels, hubs ivory as the fuselage, the tires tank grey.



Decals

The decal sheet contained the registration for the two first Pander D's, the prototype H-NACM and the H-NACO. The black registration decals needed some retouching with a black drawing pen. Also, it was not easy to replace the O of the fuselage registration with the M; the decal has to be separated between the thin line under the registration and the O, leading to damage of the line.



The decals are thin but very vulnerable. The black was easily damaged and the red and blue even disappeared when nudging the decal in place with a wet brush. The colour seemed to dissolve from the underside. I have retouched the colour carefully with paint.

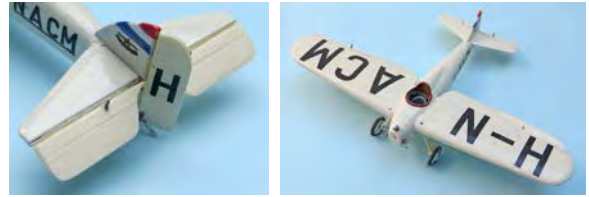


As I was not certain whether the decals would sustain a sealing with clear acrylic varnish, I have made a test sample with the left over O's. This

worked well, but when sealing them I noticed the drawing pen ink dissolved, so I have left the corrected part as much as possible untouched.

Assembly

Rudder, elevator and ailerons have been provided with grey painted PE control horns. I have mounted the elevator with downward deflection and the rudder with tail skid deflected to the right. The right aileron has been mounted downward, the other one upward deflected.



I have made the control cables from 0.08 mm fishing line, lacquered black, glued in slanted drilled holes and tensioned over and glued to the PE control horns. To finish the model I have cut out the windscreen, bent it in shape and glued it with Kristal Klear in front of the cockpit opening.

After I had put the pictures of the finished model on a forum, a fellow modeller pointed out that the rudder had been mounted upside down. So this was the start of a restoration job. Breaking the rudder loose without much damage was not too difficult, as well as removing the tail



skid and the control horns. However, the bad quality decals did not survive, as well as one of

the control horns that disappeared from my work bench. A fast print of some "H" decals and the PE box were a great help here. I have repainted the rudder, glued the dark grey painted control horns and tail skip to it, applied the decals and have glued the rudder to the fin and aft fuselage. I have cut out the windshield from the piece of transparent plastic, bent it slightly and glued it in front of the cockpit opening. This concluded the build.



Summary

The model is not difficult to build, but the quality of the resin casting was, to say the least, not excellent. Even after several putty-primer cycles some air bubbles remained visible after the final paint layers were applied. The cylinders are absolutely not to scale, but a scratch build alternative is not difficult to make. My decal set was of mediocre quality; they were badly printed and even with a coat of Microscale Liquid Decal Film they were very easily damaged; it seemed that the water was attacking the ink through the bottom layer. However, it is a nice addition to my collection of aircraft from Dutch designers, and a welcome product derived from a project by one of my fellow scratch builders.

Below some pictures of the completed model are shown.







References

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Appendix Pander D documentation

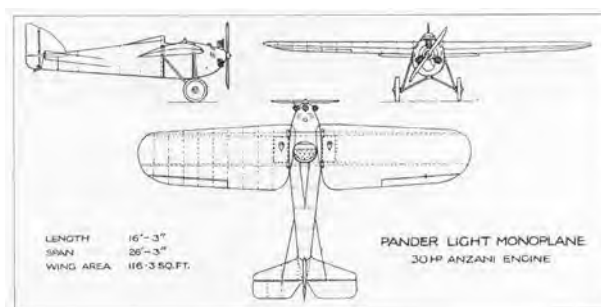
Paint table

H = Humbrol, R = Revell Aqua, V = Vallejo, M = Marabu paint stick

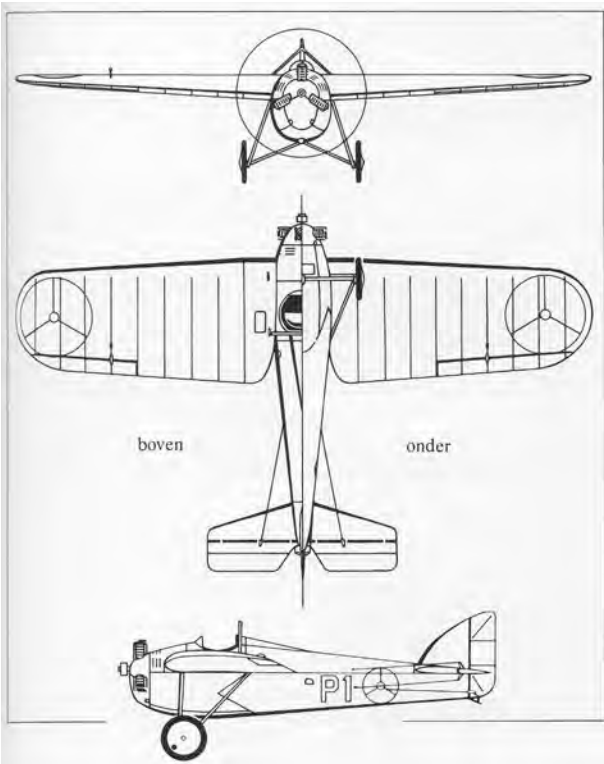
| Code | Colour | Where |
|---------|--------------|---|
| H21 | Black | Engine cylinders |
| H41 | Ivory | All external surfaces and undercarriage |
| H53 | Gunmetal | Engine cylinders (dry brushed) |
| H62 | Leather | Seat & head rest padding |
| H110 | Natural wood | Propeller |
| H129 | Light grey | Cockpit walls |
| H133 | Brown | Cockpit opening edges |
| H164 | Dark grey | Control stick, seat back, control horns |
| V71.062 | Aluminium | Propeller hub |
| V71.065 | Steel | Engine exhausts |

| Code | Colour | Where |
|----------|----------|-------------------------|
| V71.036 | Mahogany | Propeller (dry brushed) |
| M0121 32 | Black | Control cables |

Photographs & drawings



[Source: ref. 5, 19]



[Source: ref. 16]



[Source: ref. 10]



[Source: ref. 8]



[Source: ref. 8]



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[Source: ref. 4]



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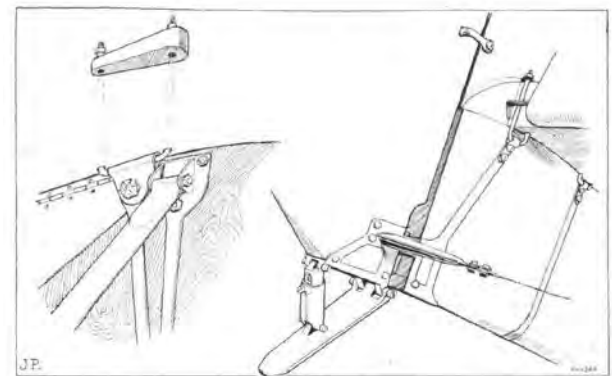
[Source: ref. 4]



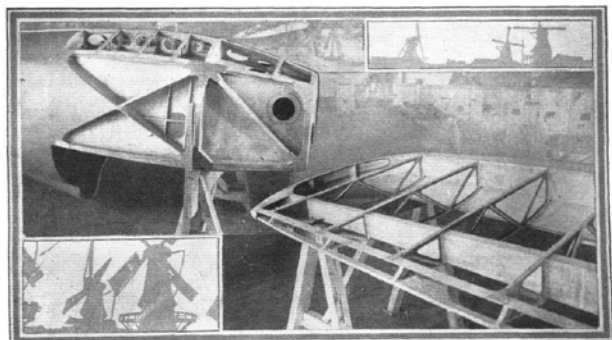
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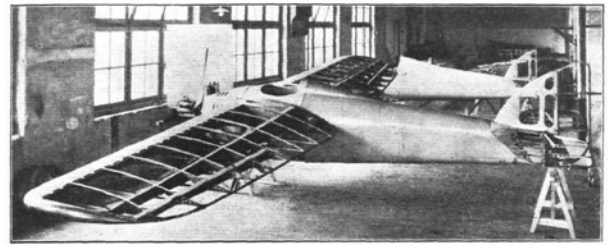
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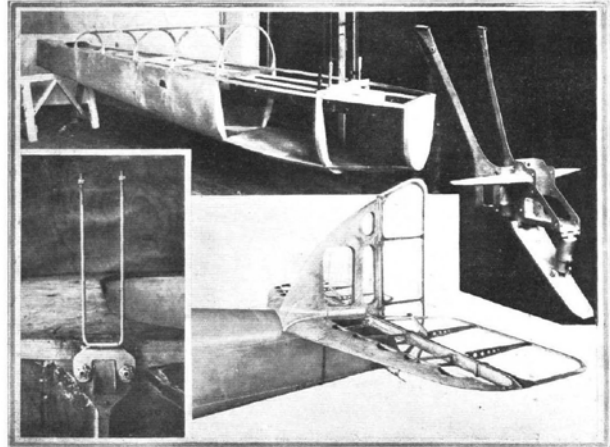
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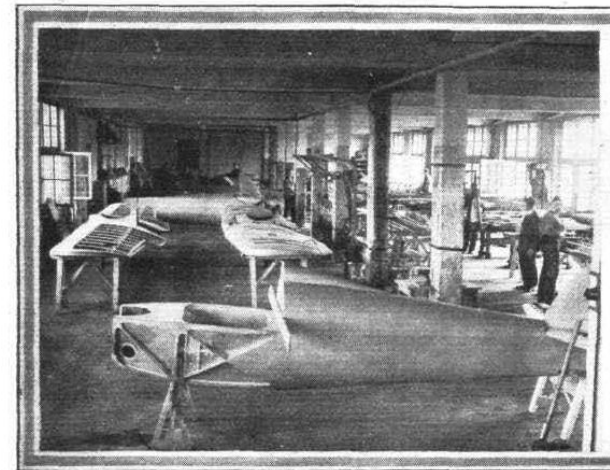
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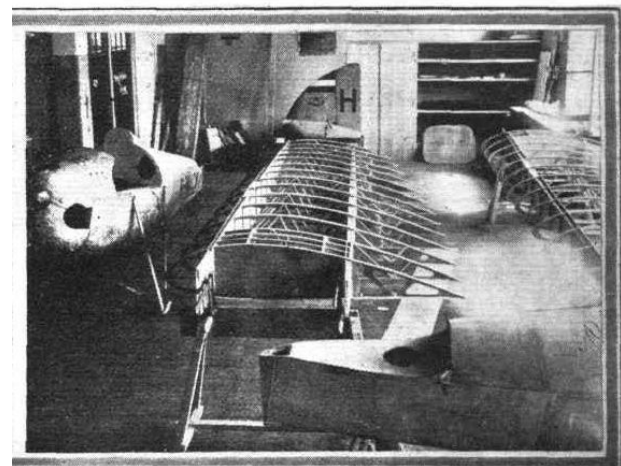
[Source: ref. 19]



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