



Aircraft history

The Koolhoven F.K.49 has been developed on request of the Dutch Ordnance Survey (Topographische Dienst, TD) and the Air Service of the Dutch Army (Luchtvaartafdeling, LVA) and was operated by the LVA. The cooperation between the TD and the LVA existed already longer and for cartography and aerial photography a Fokker F.VIIa/3m or a Fokker C.IV of the LVA was used, for which only the direct operational cost was charged. The last one was not really fit for the task, the observer/photographer was sitting in open air and the available equipment was limited.



The LVA used the first aircraft for other missions too -training, transport, bombing flights- so it was badly available. The three-engine plane was also relatively expensive in operating. The Royal Dutch Airlines (KLM) had also an aircraft specifically equipped for cartography/aerial photography, the Fokker F.VIII PH-OTO, but this plane was commercially exploited, so even more expensive.

So an alternative was sought, which was less expensive to operate than these aircraft. When the Koolhoven F.K.48 appeared in 1934, a passenger aircraft accommodating six people and motorized by two six cylinder in-line air cooled Havilland Gipsy Major engines of 135 horsepower, such an alternative seemed available. From the F.K.48 design Koolhoven developed in 1934-1935 the F.K.49 equipped with an on-board dark room. It was of mixed construction (a wooden wing and a steel tube fuselage covered with plywood and linen). The aircraft had dual controls, so it could also be used for training. It accommodated a crew of four, a pilot, a navigator or second pilot, a photographer and an assistant photographer. The aircraft with a very characteristic angular forward fuselage was bought by the LVA, made its first flight on September 22, 1935 and was registered as 950. It was used for reconnaissance and photography missions by the LVA and was operated against direct operational cost by the LVA for the Ordnance Survey for cartography missions. It has been scrapped after the German occupation of the Netherlands in 1940.

The aircraft was further developed as F.K.49A in a cartography/transport plane function for Turkey and a (float plane) air ambulance version for Finland.

Aircraft characteristics

Span:	16.00 m
Length:	11.60 m
Height:	3.12 m
Empty weight:	1437 kg
Take-off weight:	2117 kg
Engines:	Two De Havilland Gipsy Major I, 132 hp
Accommodation:	Two pilots or pilot and navigator; photographer and assistant photographer.

References

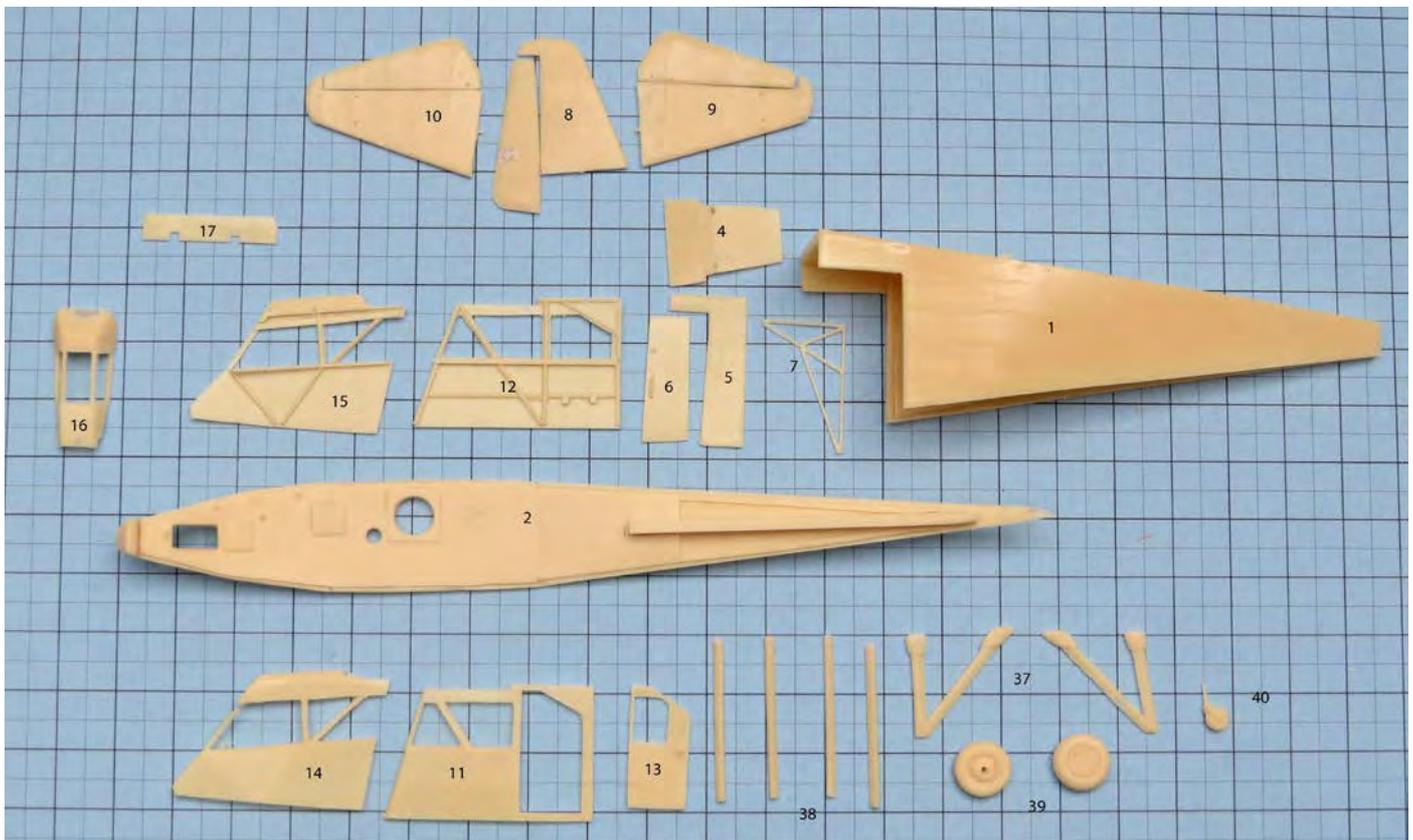
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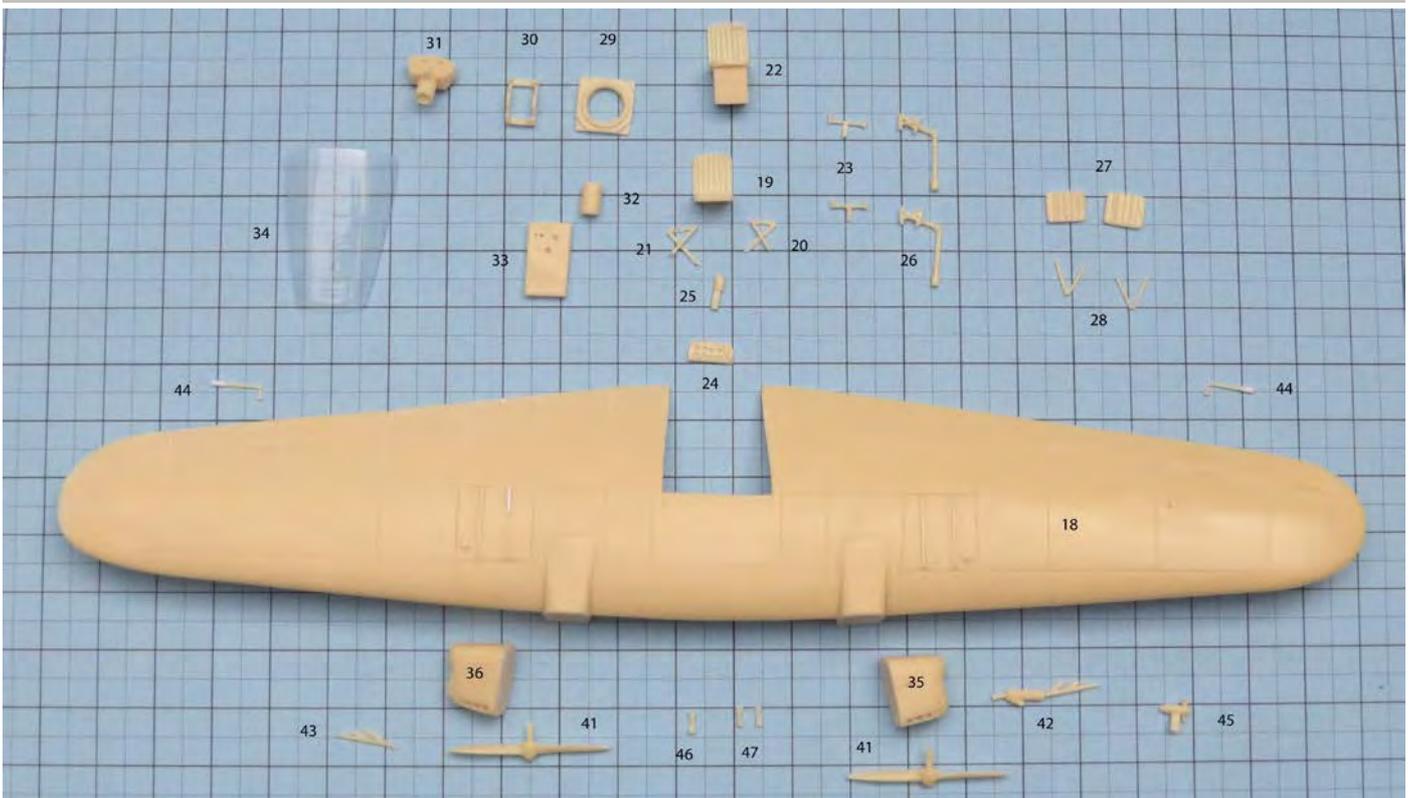


Additional material and information has been received from Harry van der Meer.

Kit contents

- 56 resin parts.
- Vacform part for the cockpit/cabin roof.
- 75 mm of 0.5 mm styrene rod for the stabilizer struts and the V-shaped frame under the instrument panel.
- 80 mm of 1.0 mm brass rod for main undercarriage struts.
- 30 mm of 0.4 mm brass rod for pins in stabilizer and fin and the pitot tube.
- 10 mm of 0.5 mm brass rod for the shaft of the tail wheel.
- 10 mm of 0.75 mm styrene rod to repair the aileron balance weight, if necessary.
- 10 mm of 0.4 x 0.5 mm styrene strip to repair the wing panel over the fuel tank.
- 30 mm of 0.25 x 0.5 mm styrene strip to serve as support for the Venturi tubes.
- Piece of 0.4 mm styrene sheet for elevator, rudder and ailerons control horns.
- Piece of 0.25 mm transparent plastic sheet for windows.
- Decal sheet with registration numbers, type details for the aft fuselage and Dunlop logos for the tires, red-white-blue stripes for the propeller tips and red-white-blue-orange roundels or orange triangles as used from the fall of 1939.
- Small decal sheet for the Airscrew Co. Ltd. Logo's on the propellers (pay attention when opening the plastic bag containing the decals).
- Four-view drawing and detailed 1/72 drawings of cabin, fuselage and engines; template and paint mask for windows and cabin roof.





Building instructions

Painting of parts and (sub) assemblies should be done at convenient points in the building process.

Note that most pictures with the instructions below have been made during the assembly of the prototype for the kit, so small differences in assembly order and configuration may be present. Also, the model has been painted with a brush; if an airbrush is used, the painting and assembly order will probably be slightly different. And of course these guidelines reflect my building routine.

The parts of this first kit show more air bubbles than later production kits; the moulds have been corrected to avoid them.

A copy of these building instructions can be downloaded from www.hollandaircraft.nl/resin_kits.html

1. Remove the resin parts from sprues; this can best be done with a razor saw. Clean the flash. Pay attention to the cabin side walls; the fine edges should fit snugly into the ridges on the bottom of the fuselage and the underside of the wing. Dry fit all parts of the fuselage and the wing, fixing them with tape to each other.

2. Probably you will have to repair parts 18 and 44, as they have been damaged during the casting process or the transport. Use a piece of 0.4 x 0.5 mm strip for the wing (18) and 3 mm of 0.75 mm rod for the balance weights (44).



3. Also, some parts need to be modified. The instrument panel (24) is slightly too large; the width must be reduced to 6.5 mm, such that it fits in the front wall (16). The "horizontal" part of the control columns (26) is too large (it will end up eccentric to the pilot and navigator seats). So take out a piece of 1,5 mm as indicated by the red lines in the picture and glue the pieces to each other again. Remove also the thicker part under the blue line.



4. Decide whether you want to mount the control surfaces in deflected position. If you decide to do so, separate elevator halves and rudder from parts (8), (9) and (10) with a saw with a thin blade and a sharp knife. Remember that the elevator half with the trim surface has to be





mounted at the port (left in flight direction) side; mark it with a piece of tape. Separate also the ailerons from the wing (18), if you want to mount these in a deflected position. This is done best by deepening the separation cut on upper and lower side with a scribe tool and finishing the cut with a knife. Remember that the aileron with the trim surface must be mounted at starboard; mark the port aileron with a piece of tape.

- Decide whether you want to mount the cabin door (13) in open or closed position. If you select the closed position, glue the door in the sidewall opening. Dry fit in any case the door, and adjust if required.

- Glue a piece of 2.5 x 13 mm sheet of 0.4 mm thick to the stiffening beam on the fuselage bottom (2). This closes the gap beneath the rear cabin wall.



- Glue the fuselage bottom (2) to the rear fuselage top (1). The parts fit rather tight. Clamp them first together without gluing and then apply thin cyanoacrylate glue on the joint dipping a thin, metal wire in a drop of glue. Remove the excess glue after it has dried with knife and sanding.



- Glue the bottom of the luggage compartment (4) in the top of the rear fuselage. Make sure the front part is horizontal.



- Attach the four cabin sidewalls (11, 12, 14 and 15) provisionally with tape to the aft fuselage (1) and fuselage bottom (2). The top of the walls should fit just under the top of the aft fuselage; the sides should be flush with the aft fuselage sides; correct if necessary. Fit also the wing (18) over the walls as a last check. Remove the walls.

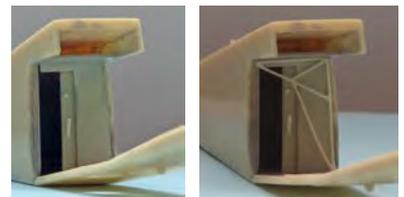


Paint the dark room walls, floor and ceiling and the inner side of the front dark room wall and the dark room door. There is no dark room furniture present in the kit, as it will be hardly visible once the front dark room wall is mounted, even with an open door.

- Glue the engines (35) and (36) to the nacelle fairings moulded with the wing (18). The small instrument panels should point to the fuselage. When you do that at this moment it is easier to apply putty to the joints and to sand them.

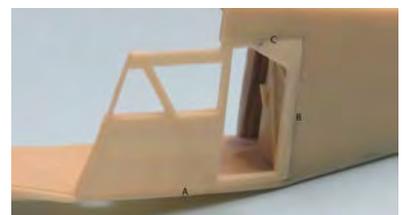


- Cut the dark room wall (5) trial and error to the correct height (about 20.5 mm) leaving at least 1 mm of the horizontal top. Cut the sliding door of the dark room (6) to a height slightly larger than the opening in the dark room wall and mount it at the back of the wall in open or closed position. Glue the assembly against the rear frame in the aft fuselage.

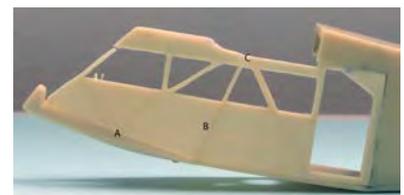


- Glue the tube frame (7) in front of the darkroom wall and sliding door.

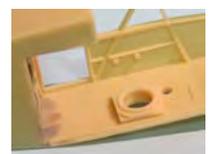
- Glue the rear side wall (11) in place. Glue first the lower edge (A), than fit and glue the rear edge (B), which gives the floor the correct angle, and finally glue the top edge (C), which gives the wall the right curvature.



- Glue the forward side wall (14) in place. Make sure the rear edge (B) rests in the recess of the rear wall. Glue first the lower edge (A), then (B) and glue the top (C) such that it is on the same height as the top of the window opening in the rear wall. If one or more of the throttle handles are missing, drill holes and insert an end of thin metal wire in them.



- Glue the camera base (29) on the floor. Take care to align the holes in the base and the floor well.





16. Glue the seat supports (20, 21) with the long legs pointing to the rear under the pilot seat (19). Adjust the length of the rear legs such that the bottom of the seat is parallel to the cabin windows lower edge. Adjust also the underside of the co-pilot seat (22), such that the bottom of the seat is parallel to the cabin windows lower edge.



Now is a good moment to paint the inner side of the left wall and the floor of the cabin. Also, the parts that go in the cabin (19 through 31). The inner side of the nose section (16) and the inner side of the starboard cabin walls (12 and 15) can be painted also, but the gluing edges should be left free of paint.

17. Glue the right rear side wall (12) in place. Follow the same procedure as for the left side.
18. Glue the forward side wall (15) in place, again following the same procedure as for the left side.



Paint the edges of the inner side cabin walls, if there is still unpainted surface visible.

19. Prepare the front wall (16). Paint the instrument panel (24), fit it again in the front wall and glue it in the nose, 2 mm higher than the lower edge of the front window. Use thick cyanoacrylate glue, which allows you to move the panel during some time. Make sure the horizontal window frame is parallel to the horizontal top of the fuselage. This is essential to obtain a proper mounting of the cabin roof.



20. Cut two pieces of 0.5 mm rod to a length of 3.5 mm each and mount them together in V-shape. Paint the V-shape. Mount them in the nose under the instrument panel. Cut excess length off, such that the gluing edges of the front panel are kept free.



21. Remove the mounting stud of the compass (25). Paint it and mount its top in the point of the V.
22. Mount the forward rudder bar (23) on the location in the nose indicated in the three view drawing and marked with a superficially drilled hole on the fuselage bottom. This is best done prior to mounting the front wall to the fuselage.



23. You can use the forward wall distance jig (17) to place the forward walls at the correct distance of each other, but if you have carefully followed the assembly procedure for the side walls that will not be necessary. Place the jig at the utmost forward position of the top of the forward walls. If the walls are at the correct distance from each other, remove it. If not, fix it in position with a drop of Microscale Kristal Klear if necessary.



24. Glue the equipped front wall (16) to the forward side walls. Use slow setting cyanoacrylate glue and make sure the windows in nose and side walls align well, that the vertical window styles of the front wall are really vertical and that the top of the front wall is parallel to the horizontal parts of the luggage compartment. Start by gluing the bottom part of (16). When that has set apply glue to the upper edges. If you have used the jig (17), remove it when the glue has dried and clean the traces of Kristal Klear from the walls. In general you will need to sand the sides and nose to obtain a smooth transition from side walls to nose.



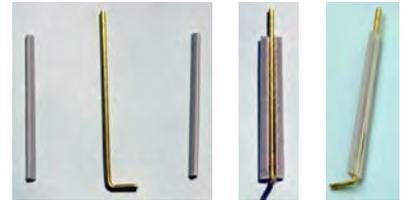
25. Dry fit the wing (18) on top of the fuselage. It should fit tight, but not too tight; remove a bit at the outer side of the lengthwise frame tubes moulded with the wings with a knife to get a good fitting. No gaps should appear between walls and wing lower surface; correct if necessary. The trailing edge should be aligned with the top "stringer" of the





aft fuselage.

26. Prepare now the main landing gear oleo struts. Cut a length of 40 mm from the 1.0 mm diameter brass rod, which will function as the core of the main landing gear leg. Bend the last 5 mm in a sharp 90 degrees angle; this will serve as the axle for the wheel. Repeat for the other landing gear leg.
27. Glue on each side of the brass rod half streamline profiles (38) of 28 mm length in a plane normal to the plane of the brass part. Keep the lower end 1 mm above the wheel axle.
28. When dry, apply putty between the two half streamline profiles and sand the surface flat. Adjust the width of the strut to 3.5 mm. Give the surface a coat of thin cyanoacrylate to make it stronger.
29. Decide whether you want to mount the landing gear in its maximum extended (flight) position or in its compressed position, which is 4 mm shorter. In the last case remove 3 mm from the top of the streamline profiles and brass rod. Use a razor saw to carefully cut the streamline profile and the putty to avoid damaging the brittle putty and splitting the profiles from the brass core. You can use the 1 extra millimetre to correct for unequal height of the wing tips.
30. Deepen the hole in the rectangular space in the underside of the nacelles with a drill of 1.05 mm diameter until the streamline profile touches the nacelle underside. Dry fit the legs in it and give the bottom of the leg a slight forward pointing attitude as shown in the three view drawing. The axle should be 24 mm below the nacelle surface (28 mm in maximum extended configuration). Mark the port leg with a piece of tape.
31. Dry fit the wing to the fuselage and fit the main landing gear legs again. Make a test set up as shown in the photograph and position the aircraft on it, the landing gear legs resting against the plastic strip and with wing and fuselage well aligned with the square pattern. Measure the height of each wing tip above the surface. Adjust the length of the streamline part of the leg at the highest wing tip bit by bit until the wing tips are on equal height.



Before mounting the seats you best apply the seat belts to them, either aftermarket PE parts, or custom made from tape.

32. Mount the forward control stick (26) on the location indicated in the three view drawing and marked with a superficial hole next to the right hand wall on the fuselage bottom.
33. Dry fit the pilot seat (19) on the forward small square moulded on the fuselage bottom. The top of the back should be only 2 mm of the back above the lower edge of the windows. Correct the length of the legs accordingly.
34. Glue the second rudder bar (23) on the superficial hole in the floor behind the pilot seat, the control column on the superficial hole next to the right hand wall and the navigator/second pilot seat (22) on the rear square moulded on the floor.
35. Mount the console (33) on the position shown in the three view drawing. Mount the drift meter (32) over the small hole in the fuselage bottom.
36. Paint the camera (31) and cut out decal (6) close to the black rectangles. Apply the decal.
37. Mount the camera (31) to the camera mechanism (30).
38. Mount the camera assembly to the square under the desired angle. to the camera baseplate (29) on the fuselage bottom.





39. Decide whether you want to mount the folding seats in up or down position. Glue the legs (28) accordingly to the seats. Mount the folding seats (27) for the photographer and the assistant-photographer on the notches on the left and right side wall. Glue them on top of the two "hinges" close to the stringer.



40. Remove the moulded pins of stabilizer halves (9) and (10) and the fin (8); they are too weak to ensure a strong connection with the fuselage. Instead drill 0.4 mm holes in those locations in stabilizer halves and fin and mount pieces of 0.4 mm brass rod in it. Drill corresponding holes on the top and in the sides of the aft fuselage (1). Pay attention that the elevator half with the trim surface goes at the port side.

41. Glue the fin (8) to the aft fuselage (1). Make sure it is normal to the top fuselage surface.



42. Glue the stabilizer halves (9) and (10) to the aft fuselage (1). Make sure they make an angle of 90 degrees with the fin (8). Pay attention that the trim surface is on the correct (port) side.

43. Drill two 0.3 mm slanted holes next to each other in the underside of the aft fuselage about 12 mm from the end of the fuselage for the control cables of the tail wheel. Drill a 0.5 mm hole in the lower end of the fuselage to accommodate the tail wheel.

44. Remove the transparent cockpit/cabin roof (34) from the vacform sheet. Remove first the bottom surface and then the forward and rear surface. Cut the paper roof template out along the edges and glue it to the roof with Microscale Kristal Klear or another substance that does not attack the plastic and can be removed easily afterwards. Keep the front edge of the template equal to the front edge of the roof.



45. Cut out the shape of the template with a small curved pair of scissors, keeping 1 mm away from its outline. **Do not cut the horizontal edges of the roof (in the plane of the picture above).** Make the roof fit trial and error to the forward sidewalls, the front wall and the wing, cutting and sanding it to the correct size and shape.



46. Prepare the roof for painting. Fix a piece of writable Scotch tape under the paint masks and glue some pieces of Tamiya tape under the Scotch tape. Cut out the red shapes with a sharp knife. Separate the Tamiya tape from the Scotch tape and the paint mask with knife point and tweezers, place them temporarily on a piece of styrene sheet. Check whether no scotch tape is left on the Tamiya tape. If so, remove it. Apply the Tamiya tape masks to the roof.



47. Give the roof first a coat of gloss transparent varnish. Paint the roof light grey. Next apply a couple of layers of khaki. Remove the paint masks and put away the roof until the wing assembly (step 53).



This is a convenient moment to paint the external surfaces and to apply the decals. Pay attention to the wing decals, part of them must be located over the ailerons. Accurately determine their position, and if you have separated the ailerons from the wing, cut the decals on the separation line and apply them separately to wing and ailerons.



48. A template for the cabin and cockpit windows and for the two windows in the floor is included in the kit. It is however recommended to check whether the dimensions, especially the



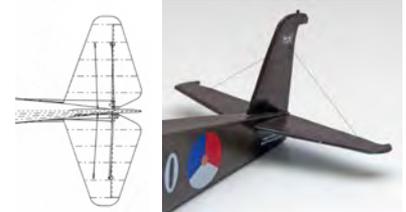


height, are consistent with the maximum dimensions of the window openings. Cut the cabin and cockpit windows from the clear plastic sheet about 0.5 to 1 mm larger than the template shapes openings.

49. Fit the windows by trial and error, cutting and sanding the edges to the correct size. Note that the cabin windows are interrupted by fuselage structure; the window passing in front of the fuselage strut must be bent slightly in the strut direction to fit well. Use straight, flat plyers for this. Glue them in the window openings with Microscale Kristal Klear or equivalent. Remove excess Kristal Klear with a clean cotton stick dipped in water. Apply the same method for the windows in the floor and under the nose.



50. Drill 0.3 mm holes through stabilizer halves and fin on the indicated places. Drill also a 0.3 mm hole at the bottom of each fuselage side 6 mm from the fuselage trailing edge. Note that the forward rigging lines run from the bottom side of the fuselage sides through the stabilizer halves to the top of the fin and that the rear rigging lines run only from the top of the fin to the stabilizer halves upper surface. Feed black painted fishing line through the rear holes in fin and stabilizer, tension them with a piece of tape and fix them with a tiny drop of glue on the bottom surface of the stabilizer. Cut the excess fishing line off.



51. Glue a piece of fishing line in each of the holes in the bottom side of the fuselage. Feed them through the forward stabilizer holes to the forward hole in the top of the fin, tension them and fix them with a drop of glue



52. Produce the stabilizer struts of 25 mm long from 0.5 mm plastic rod. Cut the ends such that they fit well on the stabilizer underside and the side of the fuselage. Dry fit them and glue them under the stabilizer halves. Note that they are mounted on the trailing edge of the stabilizer halves.



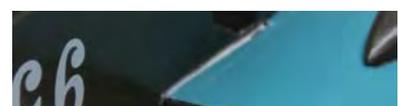
It may be convenient to paint the small instrument panels on the engines, to paint the wing and to apply the decals to it before mounting the wing on the fuselage. In any case the lower part of the wing, which forms the ceiling of the cabin, and the leading edge part covered by the cockpit/cabin roof must be painted before assembly of the wing.



53. Glue the wing on the top of the fuselage walls. Carefully feed drops of cyanoacrylate glue in the joint between fuselage wall top and wing by means of a metal wire.



54. Fill the gap between the aft part of the wing and the fuselage with e.g. Vallejo putty, excess of which can be cleaned with a cotton stick dipped in water.



55. Fit the roof on wing and fuselage and make sure it is tight against the rear part of the front cabin wall. Glue the rear part of the cabin roof to wing with a glue that does not attack the clear plastic or paint, e.g. Microscale Kristal Klear. Remove excess Kristal Klear with a clean cotton stick dipped in water. Glue next the sides of the roof to the top of the walls with very sparingly applied anaerobe cyanoacrylate glue. Fill the joints with white glue. Remove excess glue with a cotton stick dipped in water. Paint the joints between wing and fuselage and between roof and fuselage and wing with a small brush.



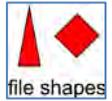
56. Prepare a strip of thin carton of 97 mm length. Use this to measure the distance from the end of the fuselage (partition between fuselage and rudder) at the bottom of both fuselage walls. Make a small cut





there, first with a razor saw, then enlarge it a bit with a knife. This is the position of the aft member and the landing gear V-strut.

57. Prepare the V strut mounting by filing the end that joins with the fuselage first with a V-shaped file, then with a small square file. Dry fit them to the lower edge of the fuselage wall at the mounting spots.



58. Apply the "Dunlop" and "aircraft tyre" decals to the main wheels (39), seal the decals with flat varnish.



59. Adjust the length of the small axle such that the distance between wheel and landing gear leg is 1 mm and mount the main wheels to the axles. Note that the port leg is still marked.



60. Fit the main landing gear legs in the holes of the engine nacelles. Check the height of the wing tips above the horizontal surface again and note down the difference. Correct if necessary the length at the side where the tip is highest, both the brass rod and the streamlined part. Shortening a leg by 0.5 mm makes the wing tip go down by about 2.5 mm. Note down whether it is the marked port leg or the other one. A mistake will require you to shorten the other leg twice the size of original correction. Shorten both the brass core and the streamline body.

61. Glue the V-struts (37) with thick cyanoacrylate glue to the lower edge of the fuselage walls on the indicated places according to the three view drawing and to the bottom of the faired landing gear leg. Check whether the wing is still horizontal; if not adjust the length of the main landing gear legs. Secure the top of the landing gear legs with a drop of glue.



62. When the glue is dry, close the gaps between the fuselage and the V-strut fairings with some white glue and retouch the paint.

63. Form a brass ring of 3.5 mm diameter from 0.4 mm wire by bending it around a wooden or plastic rod, e.g. a brush handle. Form the ends in the shape of the Greek character Ω. Glue the ring to the axle of the tail wheel.



64. The resin shaft of the tail wheel is not strong enough to carry the weight of the model, so cut it off. Drill a 0.5 mm hole in the surface, where you have cut off the shaft, in the direction the shaft has been pointing. Mount the piece of 0.5 mm brass rod in it.



65. Mount the tail wheel (40) in the 0.5 mm hole, if required with a deflection corresponding to the deflection of the rudder. Insert two pieces of 0.06 mm fishing line or equivalent in the slanted holes you have drilled in the fuselage underside (step 43). Tension them over the ring and glue them with a drop of superglue. Cut the excess line off when dry.



66. Produce control horns from 0.4 mm thick plastic sheet. Mount them to the elevator halves, the rudder and the top of the ailerons. Make sure that their position corresponds to the drawing and to the control cable holes in the wing.



67. Mount also a small control horn on the trim surface of the starboard aileron.



68. Mount the aileron balance weights (44) under the ailerons at the same place as the control horns. Note that the balance weight should point forward and slightly down, when the aileron is in neutral position.



69. Mount the exhaust (42), the one with the heat exchanger, under the right side of the port nacelle. Support the heat exchanger with a short piece of 0.4 mm brass wire. Fit it by trial and error and glue it in place. Bend the tube leading from the heat exchanger to the





nacelle from a piece of 0.5 mm styrene rod, fit it by trial and error and glue it in place. Use the detailed drawings as a guideline.

70. Mount the small exhaust (43) under the right side of the starboard nacelle.



71. Drill a superficial hole on the crossing of the panel lines of the aft wing spar and the second inboard rib of the port wing. Mount the air driven generator/pump (45) on that place according to the drawing.



72. Glue a piece of 0.25 x 0.5 mm styrene strip to each of the three Venturi tubes (46 and 47). Paint the tubes and cut off the strip at about 2 mm from the Venturi tube. Bend also a piece of 0.4 mm brass rod in a 90 degree angle.



73. Drill three superficial 0.5 mm holes under the nose at the locations indicated in the drawings where the Venturi tubes are mounted. Drill a 0.4 mm, deeper hole at the place where the thin tube is located.



74. Mount the Venturi tubes and the thin tube under the forward fuselage on the indicated locations.

75. Paint the navigation light on the top of the fin first silver, then translucent red. Paint the one under the fuselage first silver, then the right aft side translucent green and the left aft side translucent red.



76. If you have separated the control surfaces from wing and tail, glue them in place with the desired deflection.



77. Open up the slanted holes for the control cables in the aft fuselage and the wing. Glue pieces of control cable in the slanted holes and let it dry. When dry lead the lines over the control horns, tension them and fix them with a tiny drop of glue.

78. Make the push-pull rod for the trim surface of the starboard aileron from 0.2 mm metal wire and glue it in place.



79. Bend and assemble the pitot tube from pieces of 0.4 mm brass wire and fix it in a 0.4 mm hole, drilled in the starboard wing on the location as indicated on the drawing.



80. Check whether the propeller shaft fits in the hole in the nacelle, if not enlarge the hole. Paint the propellers and apply the decals to them.

81. Glue the propeller shaft in the hole. Use Microscale Kristal Klear or equivalent, if the hole is larger than the propeller shaft.



82. Model the sliding windows of the cockpit with thin slices of aluminium tape.

83. Mount the door, if you are building the model with open door.



Painting instructions and decal placement

With the painting instructions the following abbreviations are used: HE = Humbrol enamel, RA = Revell Aqua, RE = Revell enamel, VMA = Valejo Model Air, VMC = Valejo Model Color. White Ensign = WE. The paints indicated are the ones I have used or matched; of course equivalent colours of other brands may be selected.

Cabin interior

Dark room walls, floor and ceiling; cabin floor: Light grey (HE129). All cabin walls: Olive drab / khaki, RAL 6014 (WE ACD04, HE66/163, 50/50; VMA 71.017; VMC 70.894). Seats: Olive drab/khaki; seat cushions: Leather (HE62). Instrument panels: Dark grey (HE134), instrument dials black (HE21). Camera, camera frame, control columns: Steel (VMA V71.065). Control column handles: Black (HE33). Rudder bars: Dark grey (HE134). Dark room door handle: Steel. Dark room red light: Transparent red (RE731)

Outer finish

Both versions: Upper surfaces, engine nacelles and undercarriage struts: Olive drab / khaki, RAL 6014 (WE ACD04, HE66/163, 50/50; VMA 71.017; VMC 70.894). Lower surfaces: LVA blue, RAL 5018 (WE ACD05, HE115). Tires: Tank grey (RA R36178). Exhausts, propeller hubs: Steel (VMA V71.065); exhausts dry brushed with rust (HE113) and gun metal (VMA71.052). Propellers: Natural wood (HE110). Wheel hubs, control horns: Dark grey (HE123). Cabin room door handle: Steel. Navigation lights: bottom light transparent red (RE731), transparent green (HE1325) and aluminium (VMA71.062); fin light transparent red.

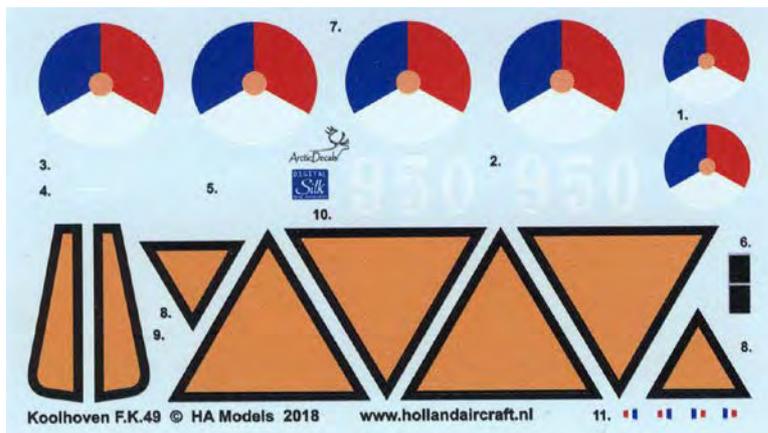
Version with roundels (prior to September 1939): Rudder: Red (HE19), white (HE22) and blue (HE14). Version with orange triangles (September 1939 – May 1940): Rudder: Black (HE33).



Decal placement

See the separate sheet with instructions how to handle the decals.

950 with roundels: See four-view drawing; (1) and (2) on rear fuselage, (3) white FK. 41 with Koolhoven logo on top of fin, (4) white aircraft and engine type text port side fuselage under stabilizer half, (5) white Dunlop logo on tires, (6) on top of camera and (7) on wing top and bottom side. The small red, white and blue decals (11) are mounted on the front surface of the propellers, leaving the tip uncovered, red pointing outwards. Two Airscrew Co. logos (12) are applied on each propeller about half way on each blade, top pointing outwards.



950 with orange triangles: Small triangle (8) with point downwards replaces the roundel on the fuselage, large triangles (10) with point rearward half way port and starboard wing in span direction; the orange rudder decal (9) is best applied on a black painted rudder. Decals (2) through (6), (11) and (12) identical to the version with roundels.

Enjoy your model.

Rob Hamann

HA Models

info@hollandaircraft.nl

Model conception, masters and decal drawings by Rob Hamann, with the technical, commercial (and moral) support of Maarten Schönfeld, Hans Berfelo and Erwin Stam. Wooden master of the wing produced by John Haas. Documentation from various books and from information provided by Harry van der Meer/Aviodrome. The resin kit has been cast by Tilly Models, the decals have been printed by Arctic Decals. Building reports of the masters for the F.K.49 models and of the prototype model of the F.K.49 can be found at <http://www.hollandaircraft.nl/K15%20FK%2049.pdf> and <http://hollandaircraft.nl/K15b%20FK%2049.pdf> respectively.