

Fokker T.V Aviation USKⁱ vacuum/injection kit

Monoplane bomber

Scale 1:72

The Fokker T.V was originally conceived as a heavily armed "air cruiser", intended to ensure air superiority in the Dutch air space. It was, however, fast superseded by more performing fighters, and has operationally been used as a bomber by the Dutch Army ML (Military Air Department), which ordered 16 aircraft. The T.V made its maiden flight in 1938??.



The nine operational T.V's saw several sorties during the short, four day operations in May 1940, mainly to bomb airfields and bridges and attacking ground troops to slow down the German progress.



The kit comes in a box and contains vacuum formed white plastic parts for wing, fuselage walls and floors and the engine nacelles, transparent plastic vacuum formed parts for cockpit, nose, tail cone and many windows located elsewhere in the fuselage, photo-etched parts for engine details, instrument panels and controls and injection moulded parts for the other components. A small piece of transparent printed film represents the instrument dials.

Painting instructions for the outside of the model are printed on the back of the box for two versions: the aluminium doped prototype and the series aircraft in its 1940 camouflage finishes. There are no instructions for painting the plane's interior. Decals are included for two versions: the one prior to fall 1939 with Dutch red,

Xotic-72
Fokker T-V Bomber

HISTORY:
The Fokker T-V was the only modern bomber in Dutch service at the beginning of World War II. Designed, flown and manufactured in 1938, it was a thoroughly modern aircraft with good flight characteristics, range and speed. Originally, 16 aircraft were ordered (850-866) but only 9 were operational in May of 1940 to face the Nazi onslaught. These few machines acquitted themselves quite well. They bombed and strafed the ground troops advancing on Rotterdam, they attacked the Ju 52 formations landing troops on the beaches of the Meuse River and made other sorties of varying success during their brief, but tenacious, three days of operational usage. Their most important contribution to the brief campaign was their use as a sort of "heavy" fighter. The T-V was armed with a 20mm cannon on a flexible mounting in the nose. Operated by the bombardier, its accuracy was to bring about the first two aerial victories for the Dutch air force. Although outnumbered, outgunned and overrun, these few aircraft proved to be worthy opponents in the hands of their very capable Dutch crews.

Specifications			
Maximum Speed	258 mph	Normal Cruise Speed	199mph
Normal Range	1,013 miles		
Empty Weight	10,229 lbs	Maximum TO Weight	15,950 lbs
Wing Span	68 ft 10.75 inches	Length	52 ft 6 inches
		Height	16 ft 5 inches

Brass Fret "M"
Film "F"
Vacuum Clear Parts "G"

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Tree "C"

Interior Floor and Bulkhead on vacuumform sheet. All Vacuumform parts are listed as "A#".

Fuselage - Left Side Details

Fuselage - Right Side Details

Tailcone Detail

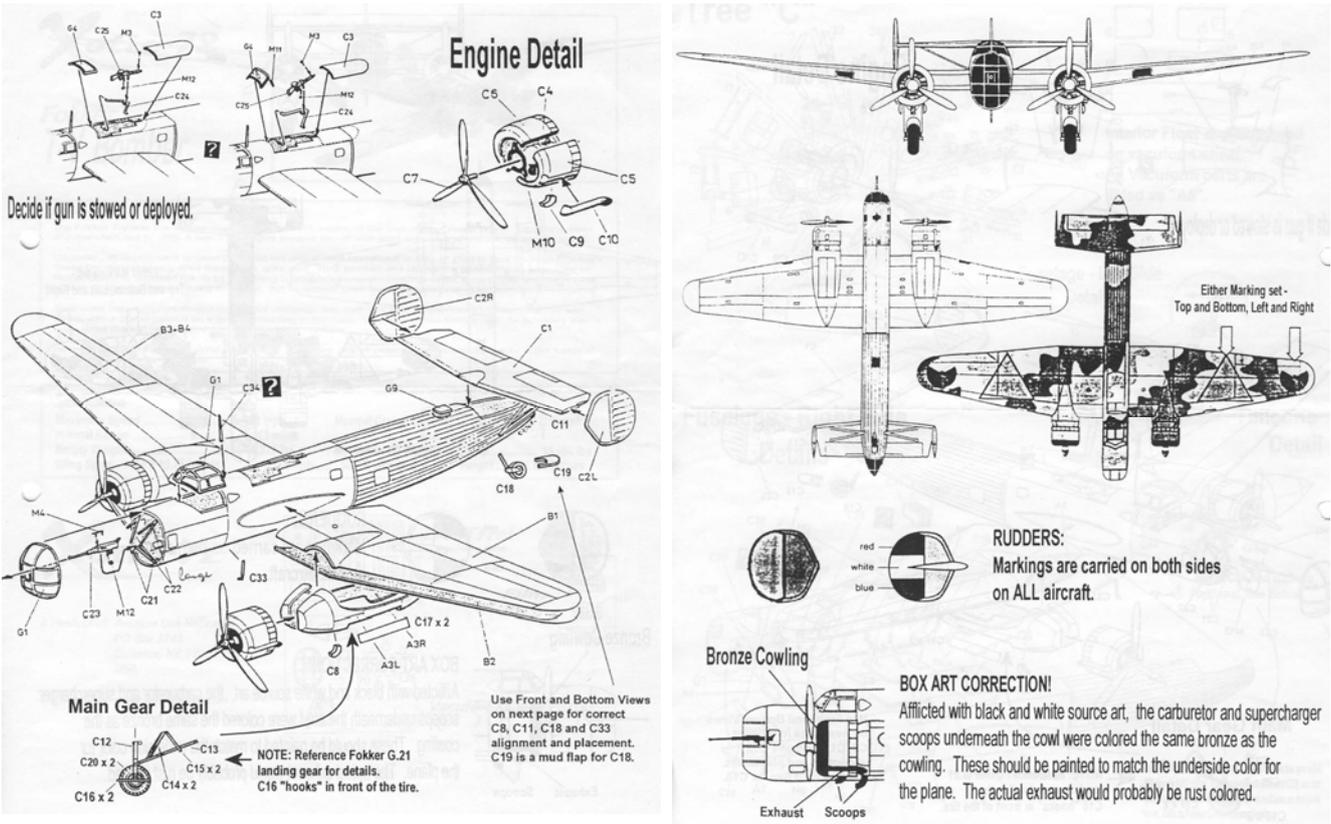
Parts C24 and C25 are optional. See Below.

Tailcone Notes: The whole tailcone rotated to give the gun a full 360 degree field of fire. The 2 gun pieces (C24 and C25) are not specifically intended for this use, but are available on the parts trees. Refer to Fokker G.1 for tailcone details.

white and blue rosettes, and the orange triangles, which replaced them afterwards.

The instruction sheet is extensive. It starts with instructions how to remove the vacuum for parts from the plastic sheet (see below at the section **General**). The sheet contains a short description of the plane's history and the

main performance figures and identifies all parts included in the kit. Their location is indicated with the help of a number of exploded views, which leave little room for misunderstandings.



The model can be built in several configurations: Of course with undercarriage lowered or up, but also with a deployed or stowed machine gun on the top of the fuselage (the T.V did not have a gun turret).

Alting (ref.1), Arnken (ref.2), Franquinet (ref. 3), Hegener (ref. 4), Hooftman (ref. 5 and 6), Schoenmaker (ref. 7), Wesselink (ref. 8), Vliegwereld (ref. 9), Gerdessen (ref. 10), Postma (ref. 11) and Casius (ref. 12) report the dimensions of the T.V, while Hegener, Hooftman (ref. 5) and Gerdessen also include a three-view drawing of the aircraft.

	<i>Ref.</i>	<i>1:72</i>	<i>model</i>
<i>Span</i>	20.76-21.00 m	288.3-291.7 mm	mm
<i>Length</i>	15.60-16.15 m	216.7-224.3 mm	mm
<i>Height</i>	4.20-5.06 m	58.3-70.3 mm	mm
<i>Engine</i>	Bristol Pegasus XXVI; 2 x 915-920 hp		
<i>Crew</i>	5		
<i>Armament</i>	1 Solothurn 20 mm cannon; 4 movable Lewis 7.9 mm machine guns; 1000 kg bombs		

General

I have chosen to build the kit with the machine gun deployed and to finish the model in its May 1940 liveryⁱⁱ.

Cockpit

<text>

Fuselage

First task was to prepare the vacuum formed plastic parts of a model. The kit includes extensive instructions how to remove them from the sheet, to clean them up and to assembly them. As I found these instructions very

useful and have employed them since, I have reproduced the instruction sheet here. I have used the same procedure for the clear plastic parts with the exception of the marking of the excess plastic. I have used two-component putty, because the plastic softens very much when using Tamyia putty, and the plastic almost does not harden any more. Use Tamyia putty only to correct the last irregularities after the first layer of paint.

The trick with the strips is essential to join the two fuselage halves. The window openings have been carefully cut out and trial and error fit with the corresponding windows. The smallest windows have been produced with Humbrol Cristal Clear, which is easy to apply.

Mounting the nose windows is difficult, especially to get a good fit between the clear plastic piece and the fuselage; it implies fitting two vacuum formed parts edge on without the possibility to use the magic strips, as one of the parts is transparent. As can be seen on the picture, there is a slight mismatch in dimensions, that is impossible to correct.

Wing

I did not make complicated constructions to reinforce the wing-fuselage joint, but just reproduced the shape of the inner wing profile on some scrap plastic, glued it to the wing location on the fuselage and joined them together, making sure they were aligned wellⁱⁱⁱ. Up till today they held well together and did not show any signs to sag. Assembling the engine nacelles to the wing was difficult, even with the aid of strips on the wings, and needed a lot of correction with putty.

Undercarriage

<text>

Final assembly

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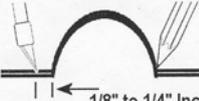
The pictures below show the finished model.



BUILDING VACUFORM KITS

INTRO:
Most modelers are afraid of vacuform kits, but there is no need to fear this medium. A single page is not going to make you an expert at building vacuform kits, but will provide the basics to complete this kit.

REMOVING THE PIECES:



1/8" to 1/4" Inch

See the sketch at the right. If you look at a vacuform sheet edge on, you see the pieces extending above the sheet. Think in terms of an injection kit sitting on this same sheet of plastic - the pieces are now too thick by the thickness of that plastic sheet. This is the difference between vacuform and injection kits. That extra thickness must be removed. This is most of the extra effort in a vacuform kit.

- 1) Carefully score around the piece with a hobby knife or plastic cutting tool. Leave 1/8" to 1/4" extra plastic all the way around the piece. Break the scrap plastic away until the piece is free.
- 2) Some modelers use a black marker on the excess plastic. Other modelers will trace the piece using a soft lead pencil. This defines the edge of the piece and shows the material to be removed.
- 3) Securely tape a sheet of medium to fine sandpaper to a flat working surface and sand the piece in a circular motion. The piece will have the excess plastic against the sandpaper (see drawing again). Maintain EVEN pressure to work the piece until the excess thickness is removed. Generally, this is when the excess border is thin enough to easily peel way from the part.

DO NOT RUSH THIS PROCESS. Constantly check to make sure the sanding is even all the way around the piece. If you over-sand a part, you can't put material back! Be careful and patient and you will have a piece that looks like any other injection piece.

- 4) I usually finish the edge on a finer grade of sand paper to make the mating surfaces smoother.

ASSEMBLY:
Once the required pieces are removed, assembly is the same as other plastic kits. Xotic-72 kits are made from a thick, high grade plastic and works well with most plastic solvents. This is not true of all vacuform kits, however, and we recommend testing your glue on scrap plastic cut from the sheet.



Test fit and trim parts as you go. Finish seams as you would an injection kit. Use lacquer base putties sparingly - epoxy putty is recommended. Again, if you are in doubt on the plastic and putty combination, test your putty on some of the scrap from the sheet.

For large parts (Fuselage halves, for instance) add a strip of scrap plastic on the inside of the mating edges for strength and alignment. (see crude drawing #2 at the left). Alternate strips on both halves of the part. This works well for the fuselage and engine nacelles. (This also isn't a bad idea on many injection kits!)

This method can also be used where wings mate with the fuselage. Another way to strengthen that joint is to build spars thru the fuselage that mate to both wings. This is the strongest method, but also takes the most work. Choose a way consistent with your patience and modeling experience.

After parts are joined and cured, they may be reinforced by adding cyanacrylate ("super glue") to the inside surfaces that can be reached before final assembly is completed.



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ⁱ www.aviationusk.com

ⁱⁱ I will also build the Czech Master Kits Fokker T.V, and finish that in the prototype livery.

ⁱⁱⁱ The front view of the model shows that I did not manage to keep the inner wing horizontal; it has a slight negative dihedral.