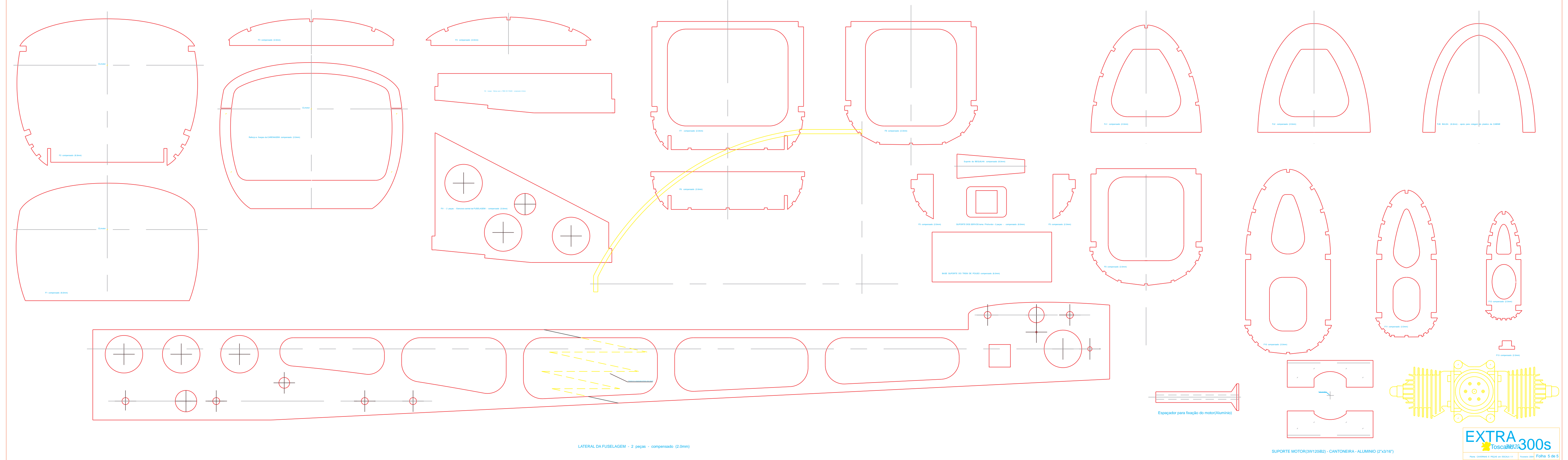
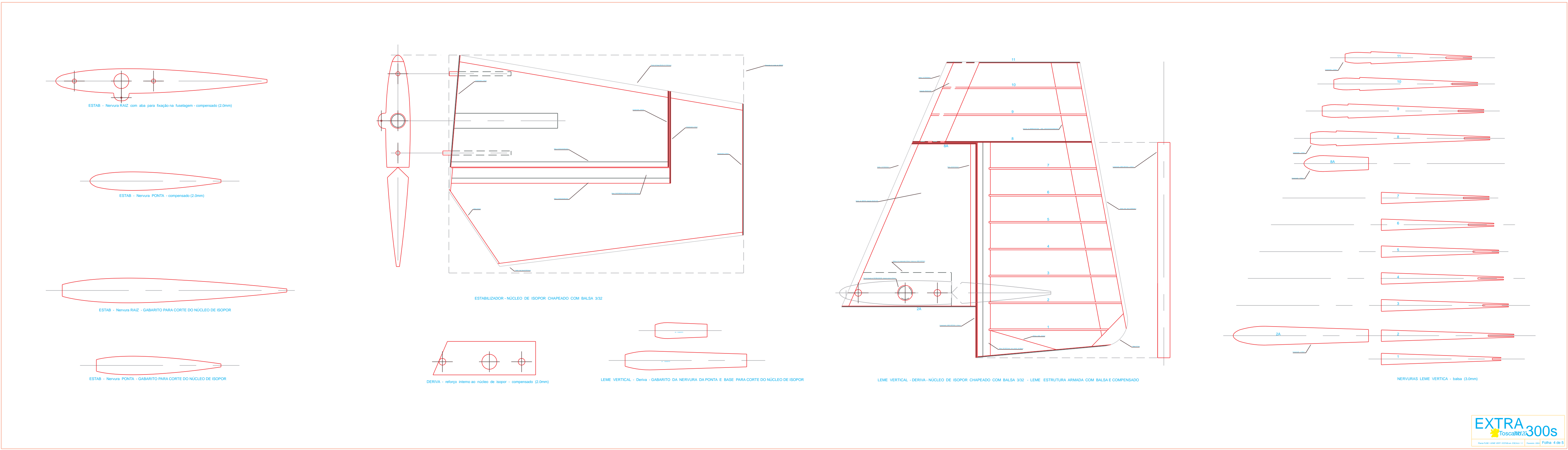
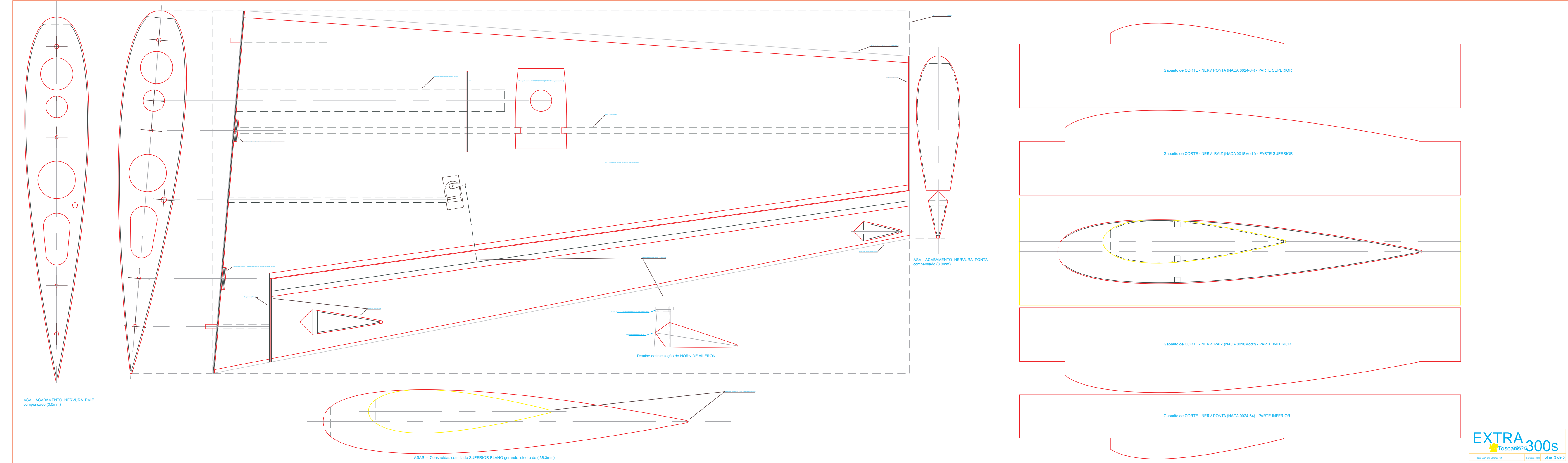
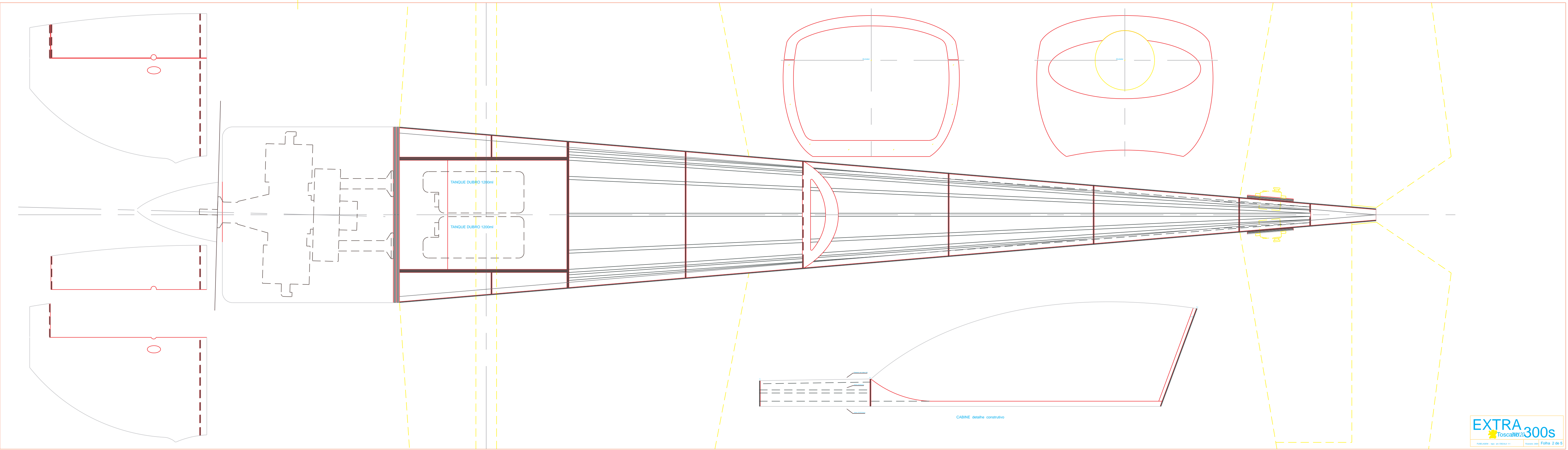
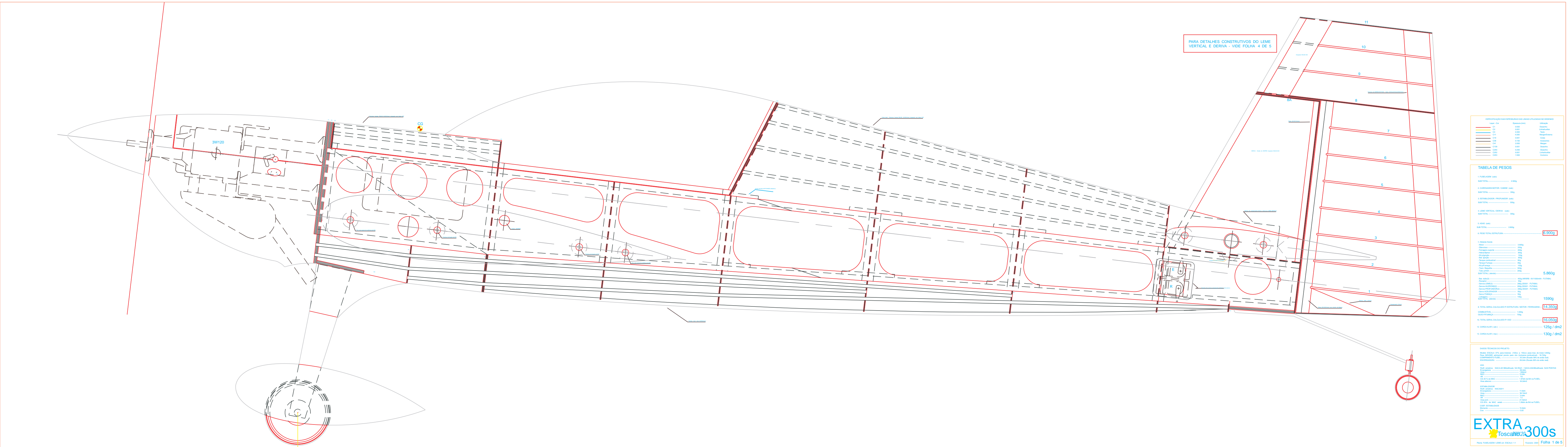


# Plano EXTRA 300s3W

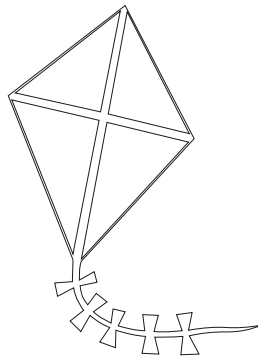


# EXTRA

# 300s

 *Toscano3W150*

Jayme Vicente Toscano - Fone (55 11) 36728447 São Paulo / Brasil - E-mail [tucano8997j2000@yahoo.com](mailto:tucano8997j2000@yahoo.com)



## TECHNICAL SPECIFICATIONS

## Warning

This RC aircraft is not a toy.

If misused, it can cause serious bodily harm and damage to property. Fly only in open areas, at AMA (Academy of Model Aeronautics) or other nationally recognized Radio Control sanctioning organizations approved flying sites. Following all instructions included with your radio and engine.

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# Technical Specification

EXTRA300s  
Toscano 3W120

## THE PROJECT - EXTRA300s 3W120

This model plane project, was made under the rules of (F3AL) class from **FAI - FÉDÉRATION AÉRONAUTIQUE INTERNATIONALE** - Switzerland, and utilize balsa, plywood, Styrofoam in the wings and stabilizer; fiberglass in the engine cowl and wheel pants.

The construction is conventional, and the finish process are made with the plastic film cover with hot iron and hot gun.

This project is fine-tuned and tweaked to excel in both precision aerobatics and wild freestyle type D, as specified in the TOC, so doing any aerobatics with this model airplane will be easier.

Please pay particular attention to the seal of the aileron and elevator hinge gaps, on large aerobatic models, this is absolutely necessary.

Follow the control horn and servo arm lengths recommended in the drawings, shorter arms on the servo or longer control horns on the elevator and ailerons to avoid flutter.

When flying aerobatics with a model of this size, you will find that it will do everything just like a smaller model, only better and easier, BUT you have to throttle back to idle when the nose is pointed down to preserve the structural integrity of the airframe.

Please don't misunderstand the purpose of these paragraph, if you take reasonable care, big model flying is a highly creative, instructive, enjoyable and relaxing part of this hobby.

## SPECIFICATION

1. Project in approached scale (37%) of the real plane, for motors from 100cc to 150cc.
2. Length of the FUSELAGE - 25.3dm (2530mm)
3. Wingspan 2.82dm (2820mm)
4. Weight of the COMPLETE STRUCTURE - 6900g
5. Weight of the complete model WITHOUT FUEL - 14350g
6. Weight of the complete model WITH FUEL / SMOKE OIL - 16050g
7. Capacity of the tank of GASOLINE 1.000ml (1 Liter)
8. Capacity of the tank of MIXTURE to PRODUCE SMOKE 700ml (0,7 Liters)
9. Propeller MENZ - 26x12 or 30x10(wood) depends upon the engine.
10. Spinner TRUTURN, 4<sup>1/2</sup> inches
11. Wheels 5 inches DUBRO inflatable, with aluminum cube.
12. Wheels pants in fiberglass.
13. Engine cowl, in two pieces (upper and lower) in fiberglass.

## AERODYNAMIC DETAILS:

### WINGS

1. SYMMETRICAL profile (NACA-0018Modified) in the ROOT
2. SYMMETRICAL profile (NACA-0024-64) in the TIPS.
3. Construction - nucleus of Styrofoam type (P2-16Kg to 20Kg/m3) veneered with balsa wood (2.3mm).
4. WING Area - 128dm<sup>2</sup>
5. Wingspan - 2820mm
6. Area of the ailerons (gross of the two wings) - 24dm<sup>2</sup>
7. MAC - 5.2dm
8. AR - 1:6
9. CG - 1.67dm (167mm, of leading edge in the fuse).
10. The wings are constructed in the form of PLUG IN to facilitate the transportation.

## AERODYNAMIC DETAILS:

### STABILIZER

1. Profile symmetrical, (NACA - 0011 )
2. Built with nucleus of styrofoam veneered with balsa wood (1.5mm).
3. Wingspan - 11.6dm<sup>2</sup> (1160mm)
4. Gross Area - 36.7dm<sup>2</sup>
5. Area of the elevators -21.5dm<sup>2</sup>
6. MAC - 3.4dm
7. AR - 1:3
8. CG - 1.26dm (126mm, of leading edge in the fuse).
9. As the wings, the stabilizers are made in the form of PLUG IN to facilitate transportation.



# Technical Specification

EXTRA 300s  
Toscano 3W120

## AERODYNAMIC DETAILS:

### FUSELAGE

1. Length - 2530mm.
2. Width - engine position 339mm.
3. High - engine position 275mm.
4. Construction - Spruce Plywood and balsa.
5. Engine cowl made in two pieces of fiberglass.

## RADIO EQUIPMENT

Although a computer radio is not mandatory, it is preferable in this model, to adjust Exponential on all controls to soften the feel around neutral.

1. Six (6)-channel computer radio system (minimum).
2. Two (2) standard servo (FUTABA S9152 or equivalent), for throttle and smoke system.
3. Six (6) hi-torque servos, metal gear, water protected, (FUTABA S5050 or equivalent), 2 for rudder, 2 for ailerons (one for each), 2 for elevator (one for each half).

The servos used for the control surfaces must have a minimum of (180-ounce / inch) of servo torque and need to be water protected, because they are externally installed.

## 3D MANOUEVERS

This model, when correctly constructed, trimmed, and equipped with a hot engine, is capable of 3D maneuvers in all of the extension of what that means.

3D maneuvers, in simplest terms, are maneuvers performed by an airplane that are not usually done in a normal airplane flight path.

What can be done with a 3D-capable plane is to make it fly like no other.

Hovering in the air nose high at a 45-degree descent, floating along in level flight, hanging on the prop, or tumble tail-over-nose in a rapid flipping motion, are normal figures in this field.

To fly 3D, you must have a plane that's capable, and it starts with having outlandish pitch control from having huge elevators, rudder and ailerons, and a powerful and reliable engine.

## CONTROL TROWS

This is a personal preference and each one has a proper style, but to start, this figure was tested and will be good.

### FLYING STYLE - STANDARD -

CG in the position of the plans, with and without, full fuel and mixture to smoke, and nose around (2°) down, in both conditions.

In this flying style, work in exponential mode to have swiftness and smoothness response, are your option and depends upon your own style.

We recommend:

AILERON 20°up / down

ELEVATOR 20°up / down

RUDDER 43°left / right

### FLYING STYLE - 3D -

CG in the position of the plans, with and without, full fuel and mixture to smoke, and nose around (0°) in both conditions, **or TAIL (1°) DOWN - PLEASE TAKE CAREFULL WITH THIS POSITION**, the plane will be very sensitive and critical, but is the best to perform 3D.

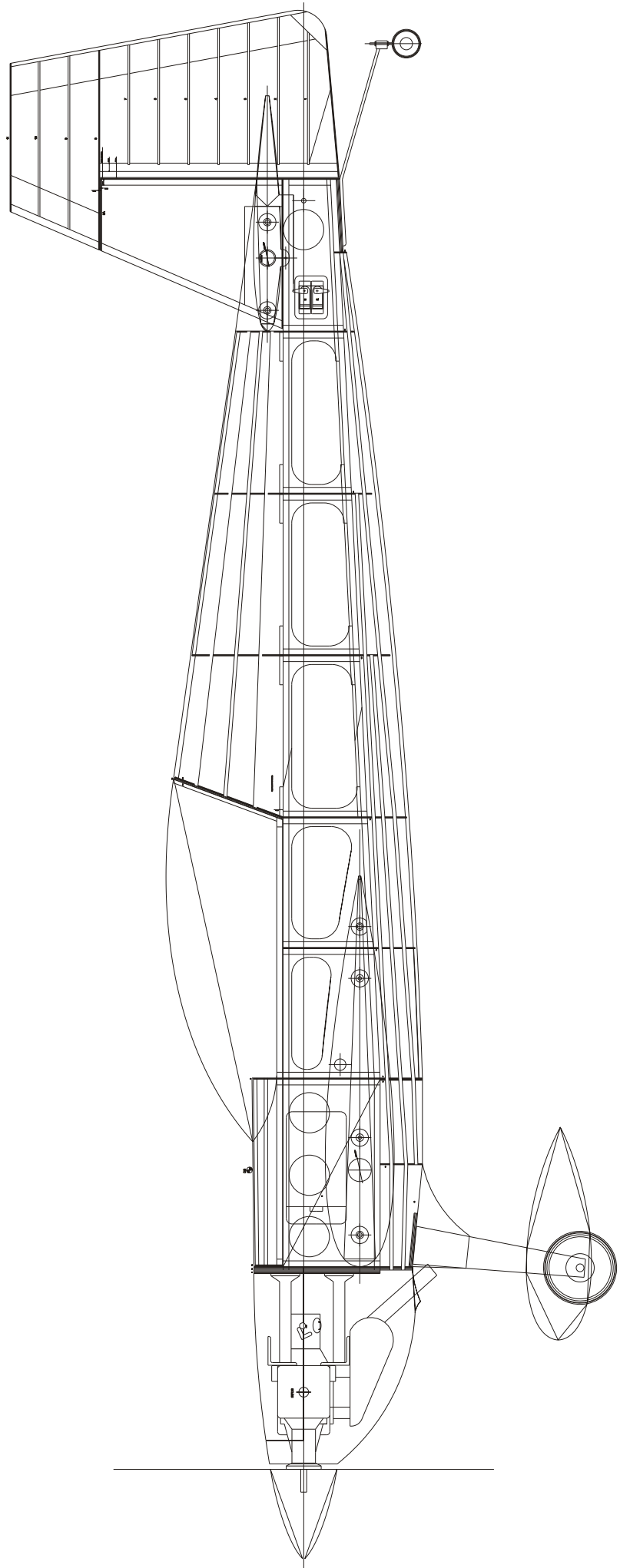
In this flying style, the control surfaces and the throottle **must need** to work in exponential mode to have swiftness and smoothness response, this is the best way to feel the model when it flight low and slow, and we are with high adrenalin.

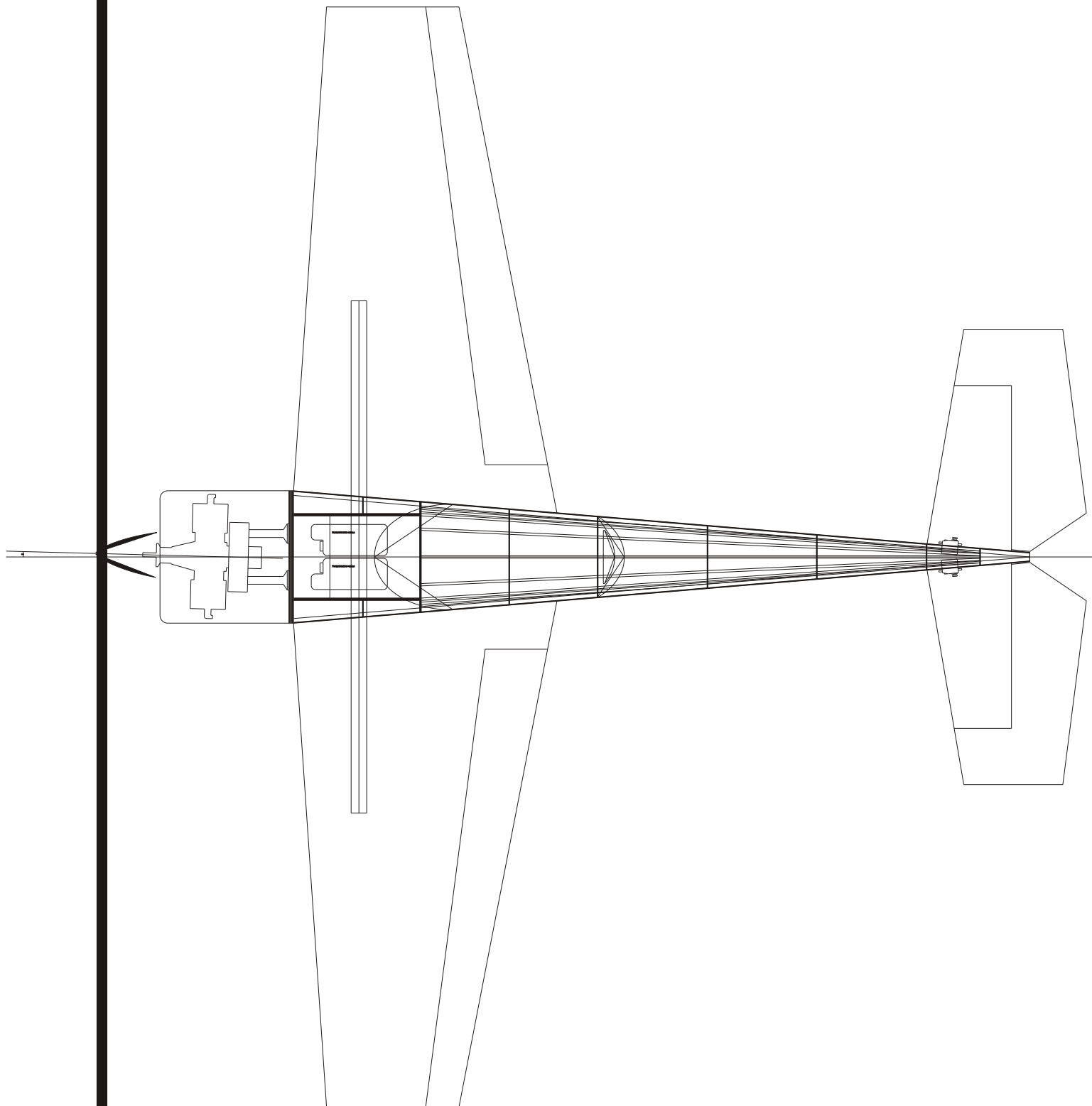
We recommend:

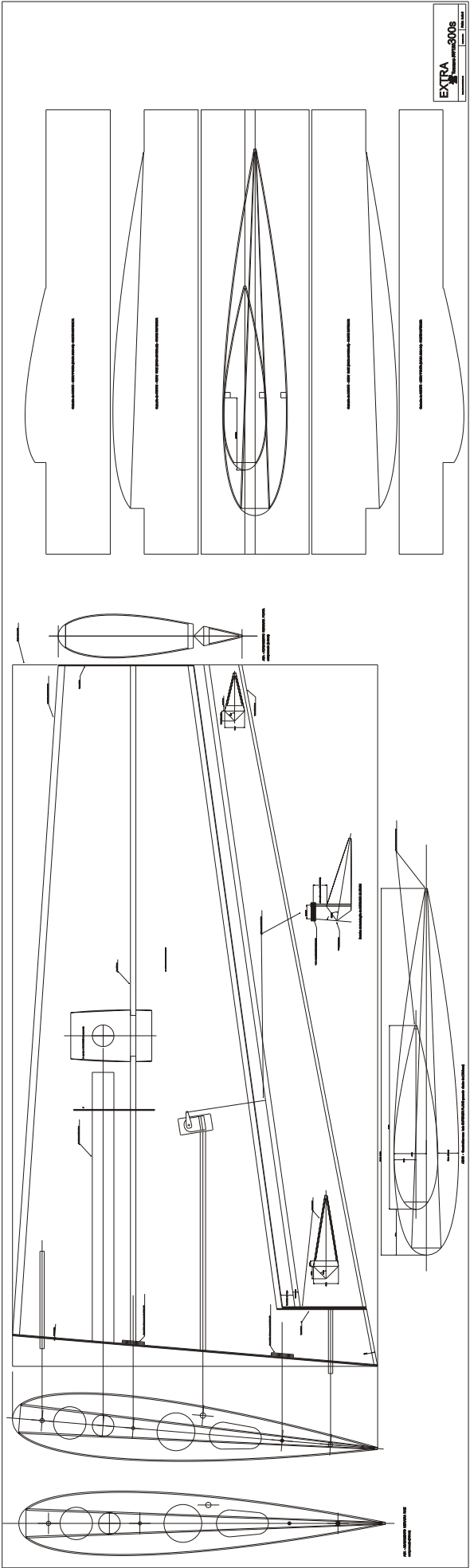
AILERON 40°up / down

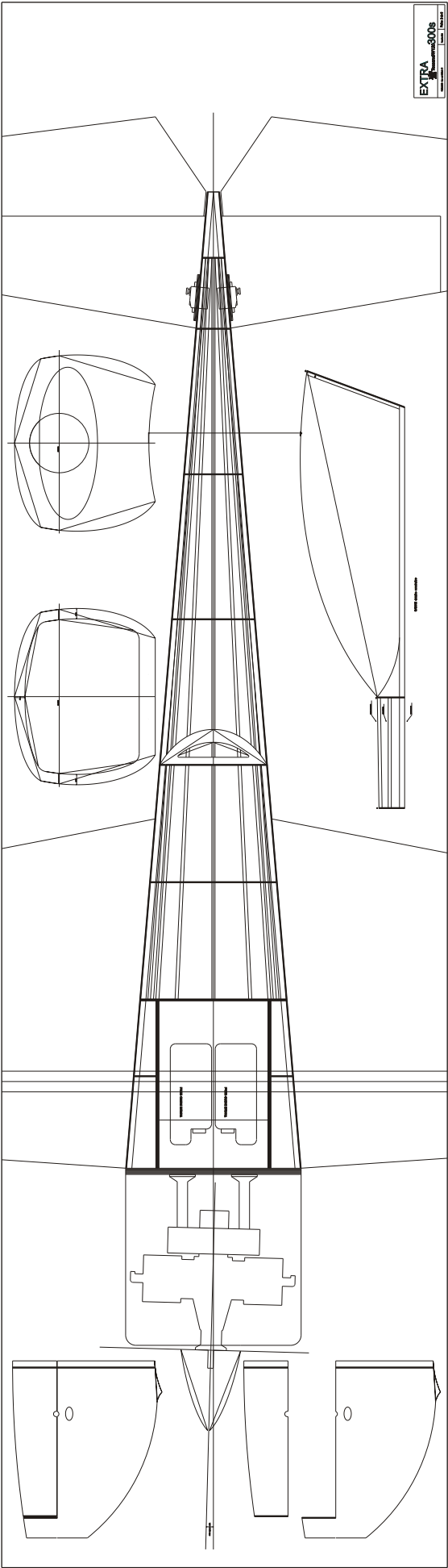
ELEVATOR 45°up / down

RUDDER 45°left / right

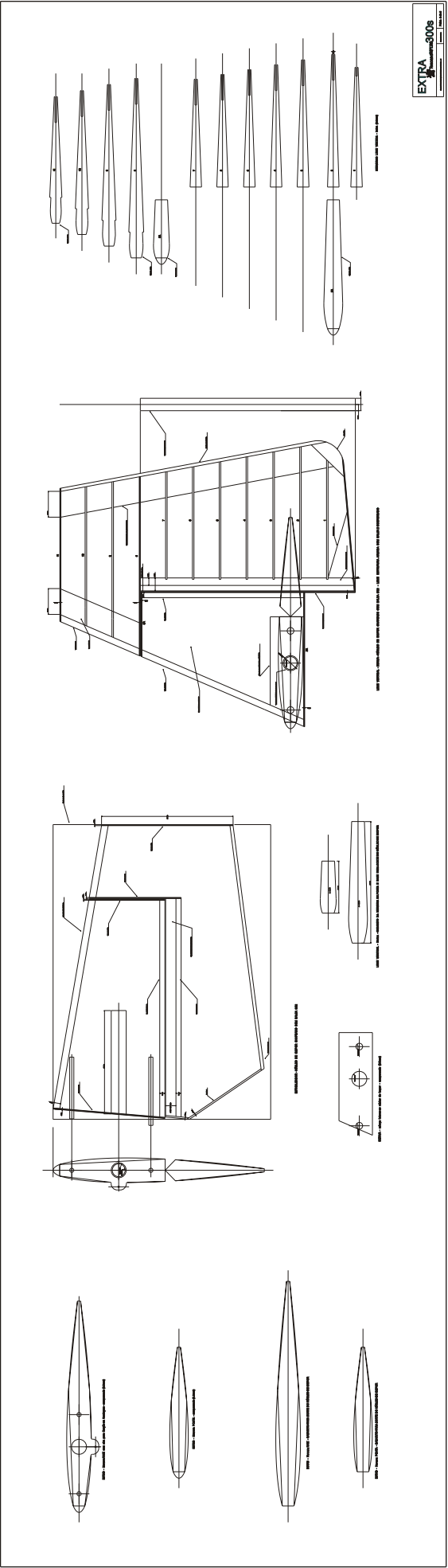


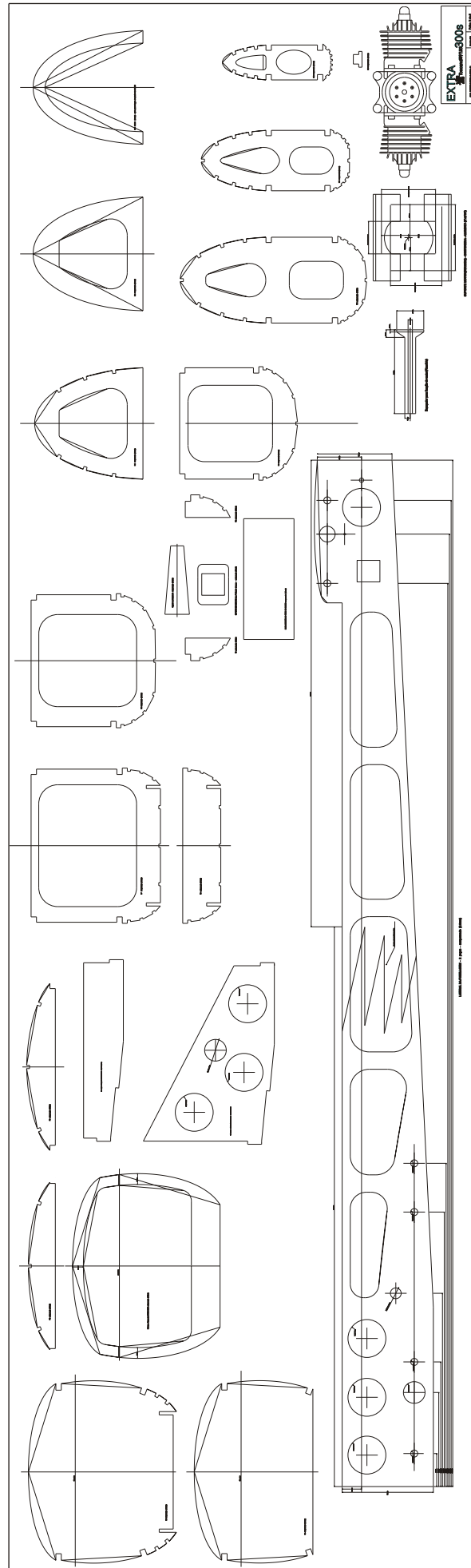












FOTOS



Photos with the details of the fuse





fuselage - frontal view

