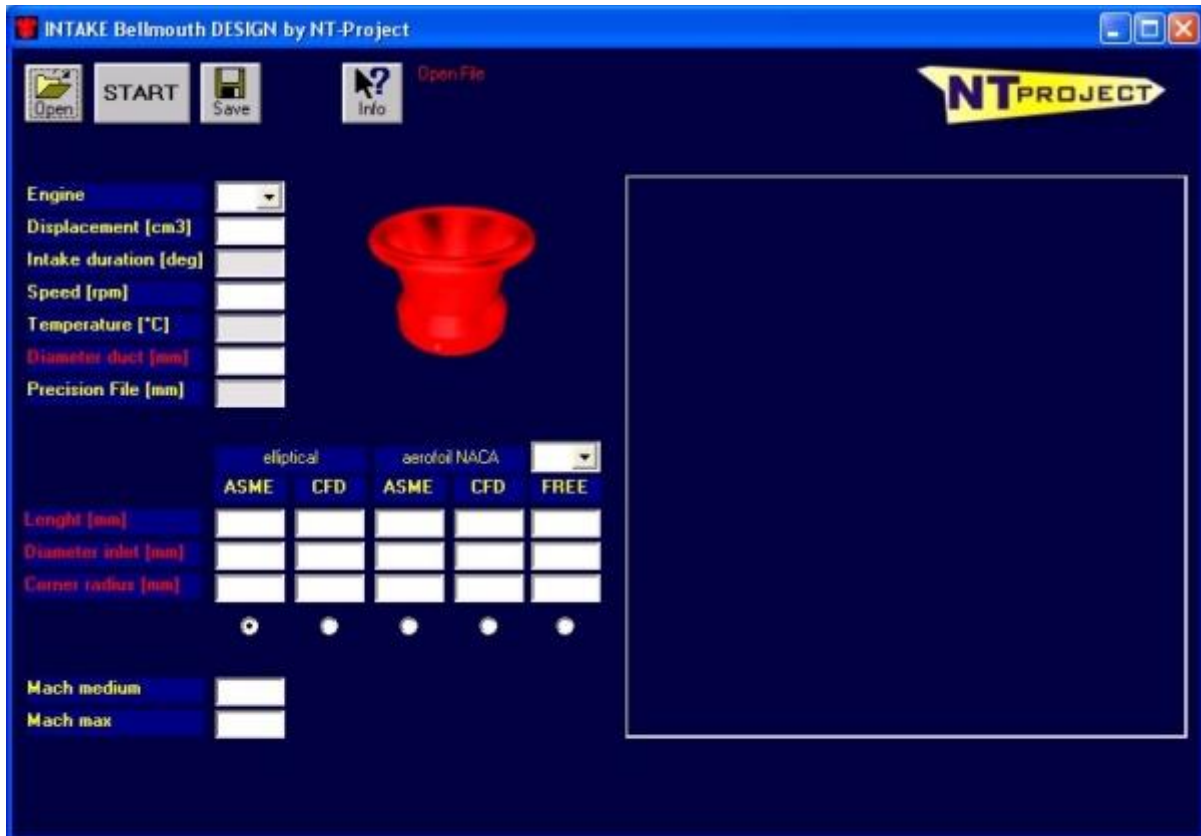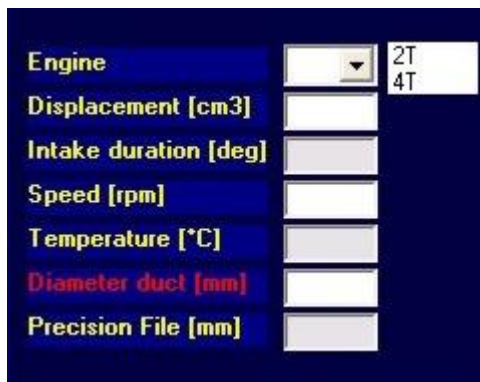# INTAKE Bellmouth DESIGN - *presentation*

Upon opening the software INTAKE Bellmouth DESIGN occurs in this way. Below we will show you how to design and draw an optimal intake bellmouth is extremely simple.

INTAKE Bellmouth DESIGN - *input data*

The software INTAKE Bellmouth DESIGN allows you to insert some data to characterize the type of flow that will be established in the intake ducts of the engine during its operation. Need to enter the type of engine, the unitary displacement, the duration of the intake timing, the maximun engine speed and the diameter of carburetor or the diameter of throttle body where you think to apply the intake bellmouth. These data will allow to calculate the Mach number and then refine the geometry of the intake bellmouth for different operating conditions.

You can also define the step of precision for the coordinates storing and for the design of the intake bellmouth.
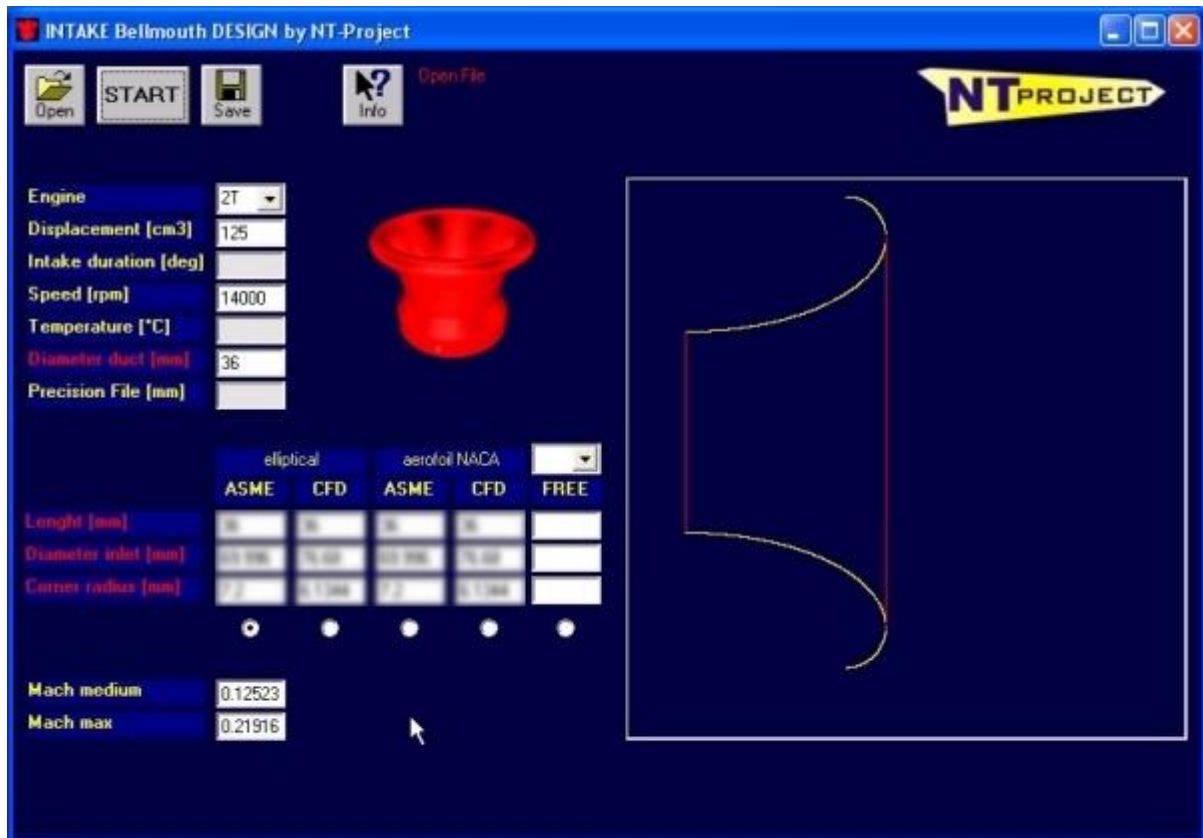

Finally, choose the algorithm that you want to use:
- Related to the Mach number, named ASME;
- Derived from calculation and experimental fluid dynamics, named CFD.

And we will choose the profile that will follow the sizing :
- elliptical;
- airfoil (NACA).

INTAKE Bellmouth DESIGN - *calculation*

Entered the data and selected the types of algorithm and profile, the software INTAKE Bellmouth DESIGN calculates and draws the intake bellmouth designed. It also shows the indicative values of the Mach number where will work the engine on operating conditions.

INTAKE Bellmouth DESIGN - *output*
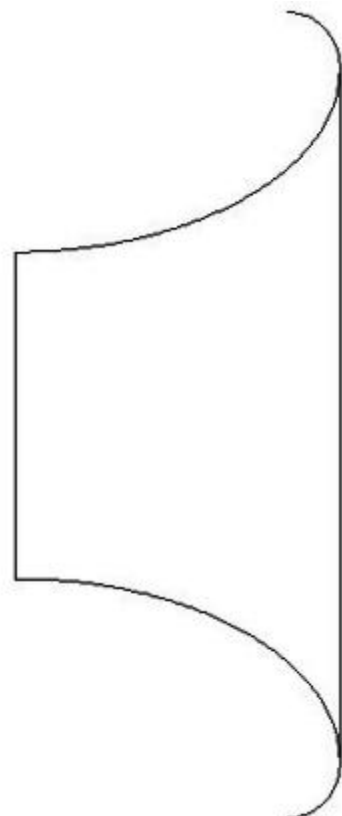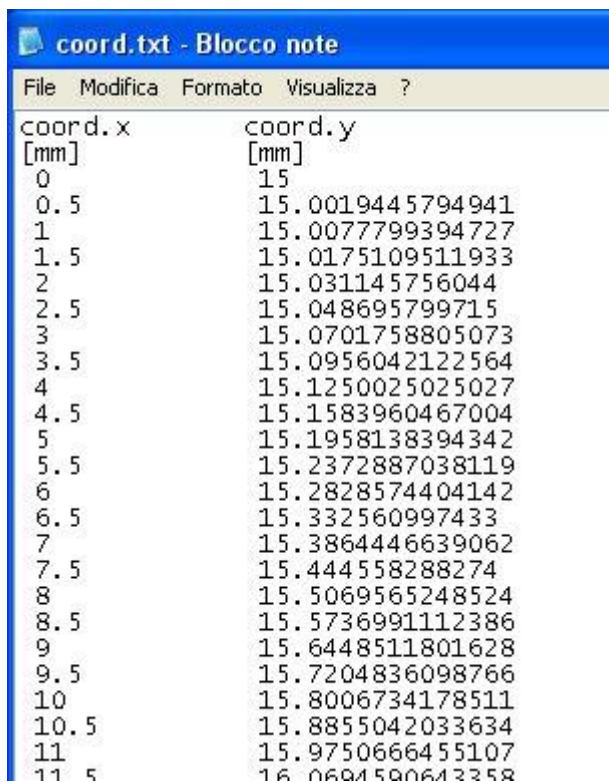
At the end of the calculation, the software creates a file TXT with the coordinates of the profile, and a drawing 2D in DXF format of intake bellmouth that that can be manipulated in CAD-CAM system

INTAKE Bellmouth DESIGN - *profile arbitrary*
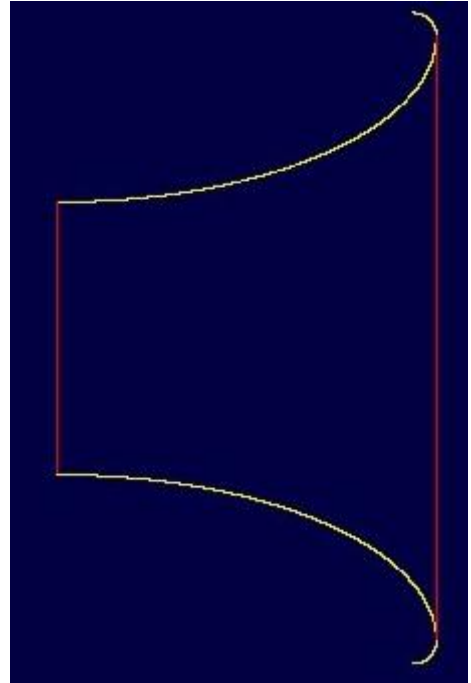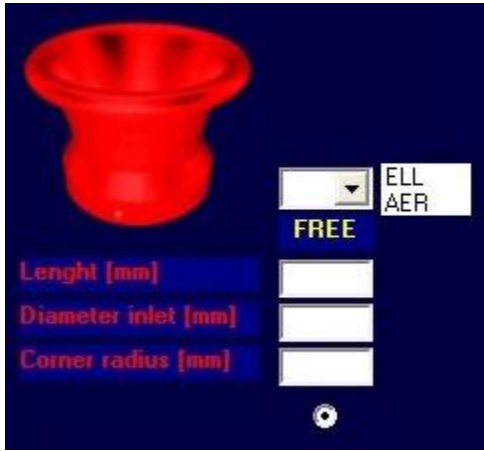
If, for any restrictions or specific requirements, you can not follow the recommended sizing, the software can create the intake bellmouth to the desired size, so you may also exploit the characteristics of the optimal profiles and have the output file and drawing 2D.