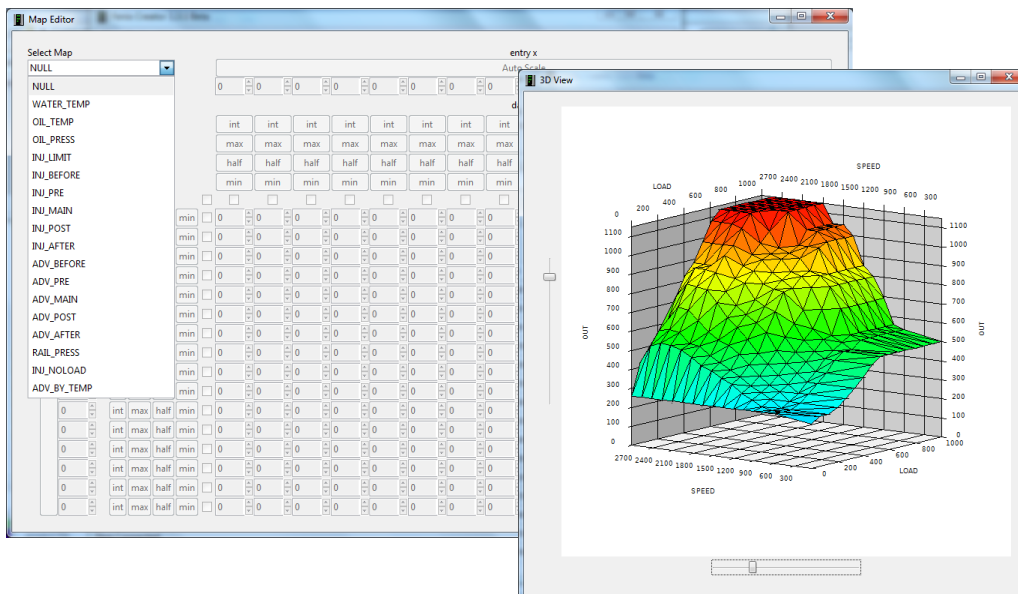
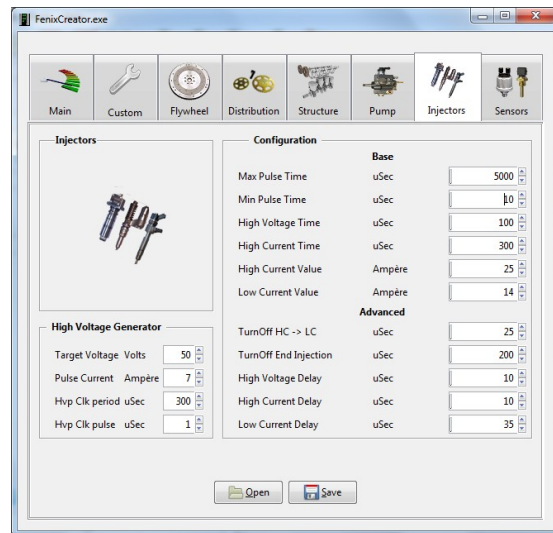
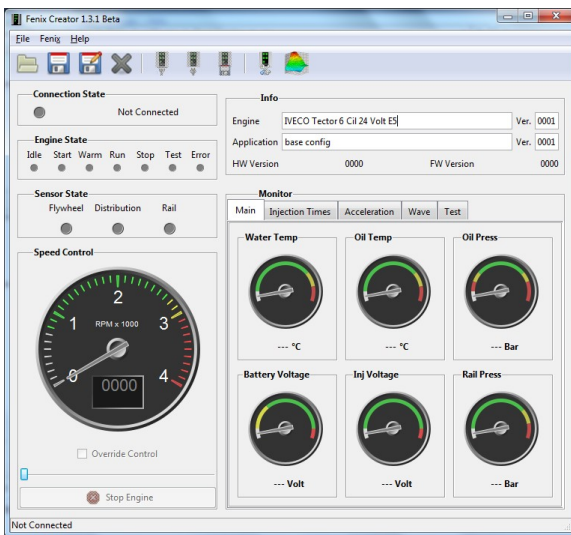




# Introduction

Fenix Creator is the software created by Linsys to deal with the Fenix Diesel Electronic Engine Control Unit, that has more than 5000 parameters, which can be changed from your PC while editing a configuration file or when connected with Fenix even on a **RUNNING ENGINE** so that you can immediately see what's happening.





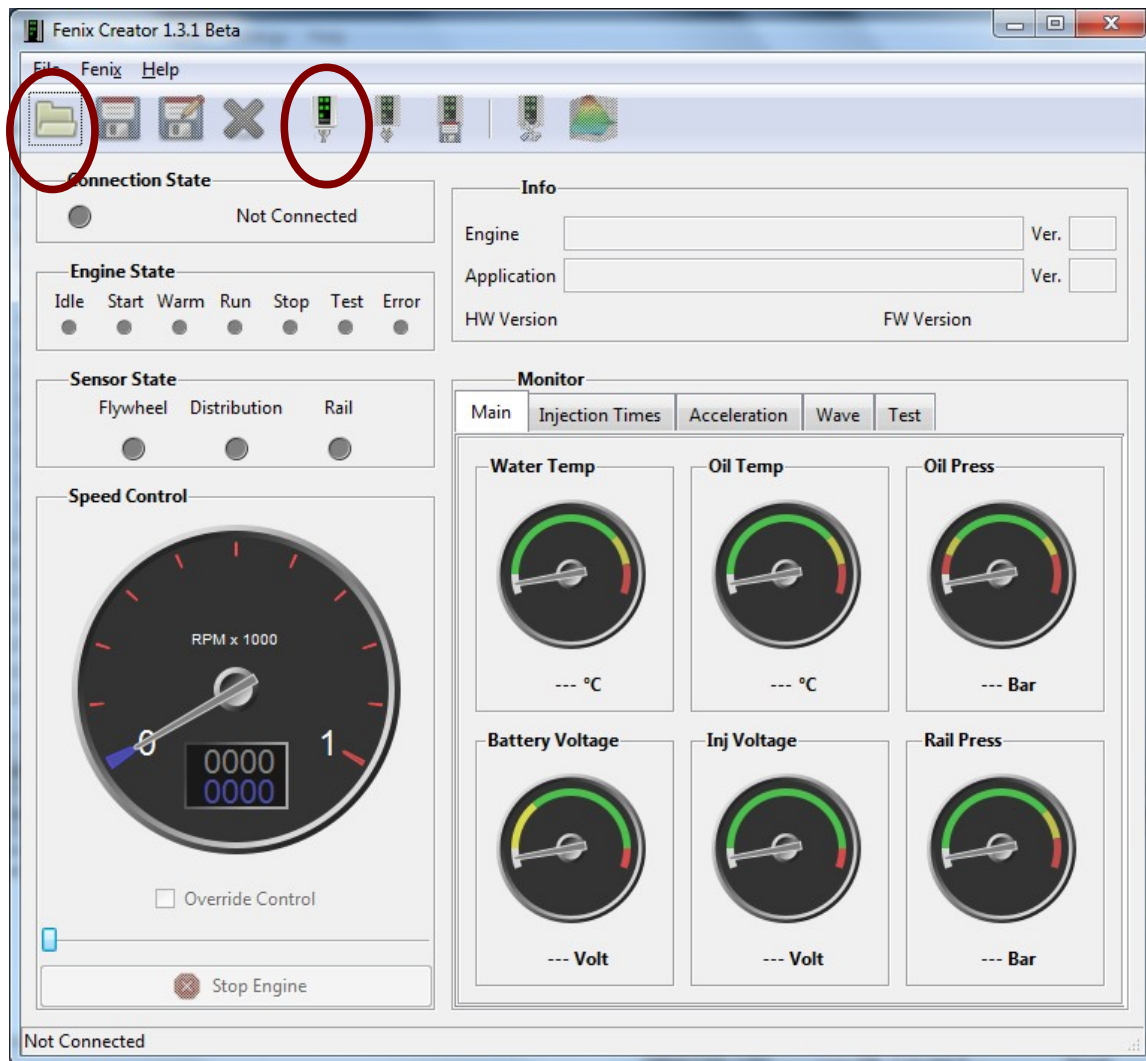
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## Main window

### Main



This is the first window you can see after starting Fenix Creator, you have only two options: open an existing configuration file or connect to Fenix.



### ***Config and Map editors***

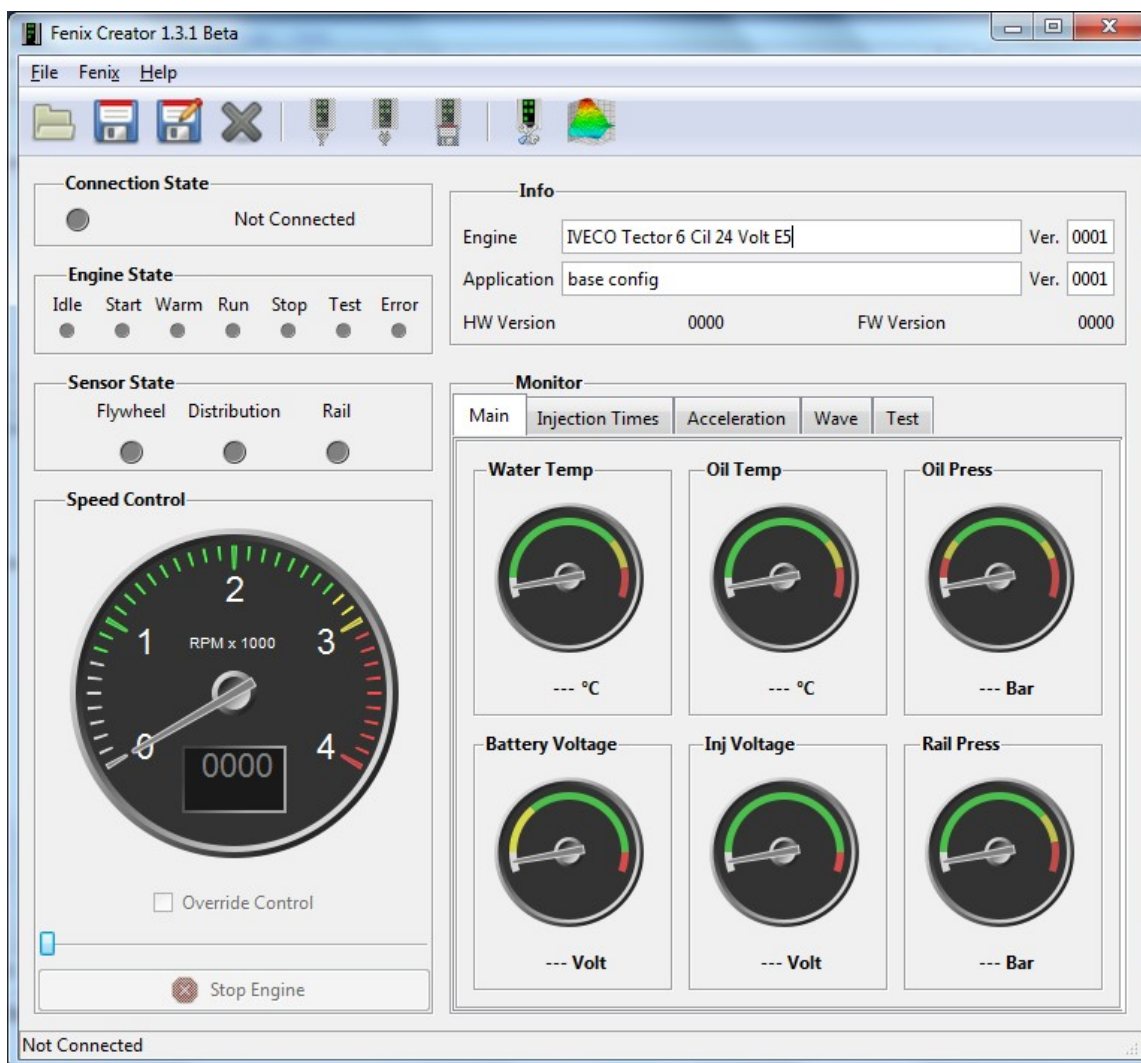
When you have opened a config file or you have established a connection with Fenix, you can access the config window or the map editor:





# Diagnostic

## Cockpit

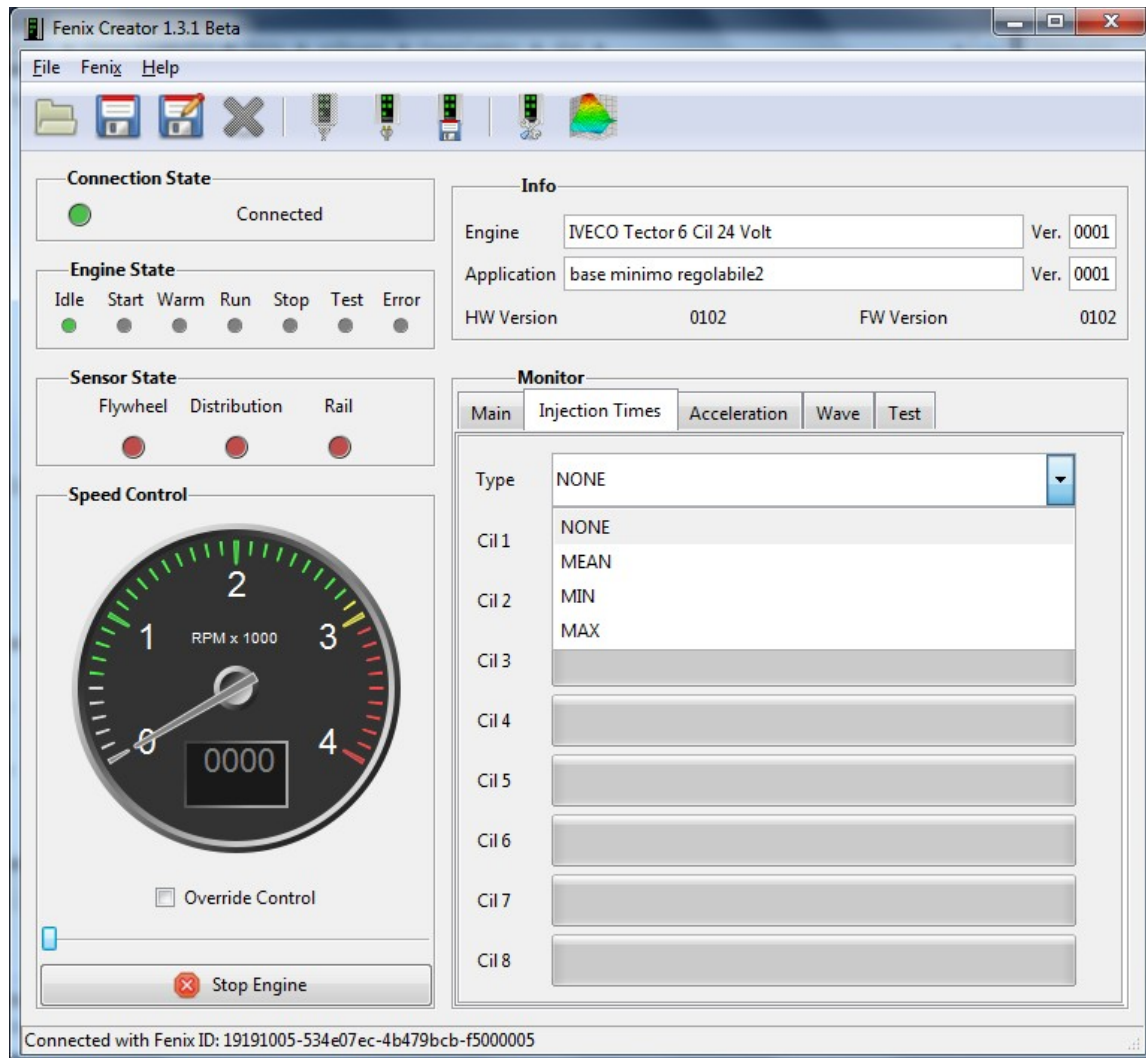


The Main tab show the cockpit with standard and advanced diagnostic info, all scale are self adapting to the config parameter you can change in the config window.

The "Override Control" override the external accelerator pedal or speed reference and you can control this functions with the slidebar.



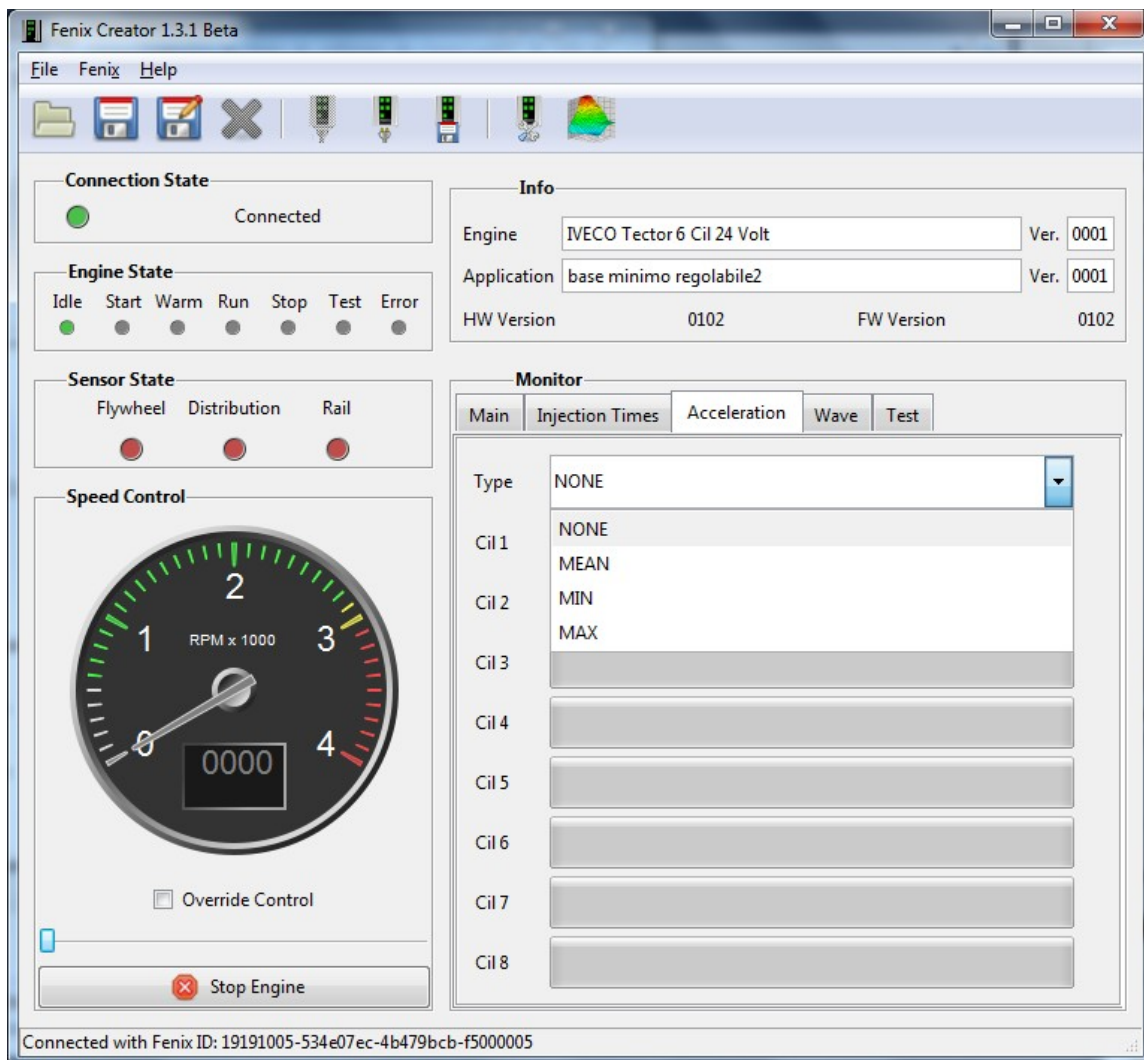
### Injections



In the "Injection Times" tab you can see the average injections times of every injector to estimate the injector balance of fuel delivery.



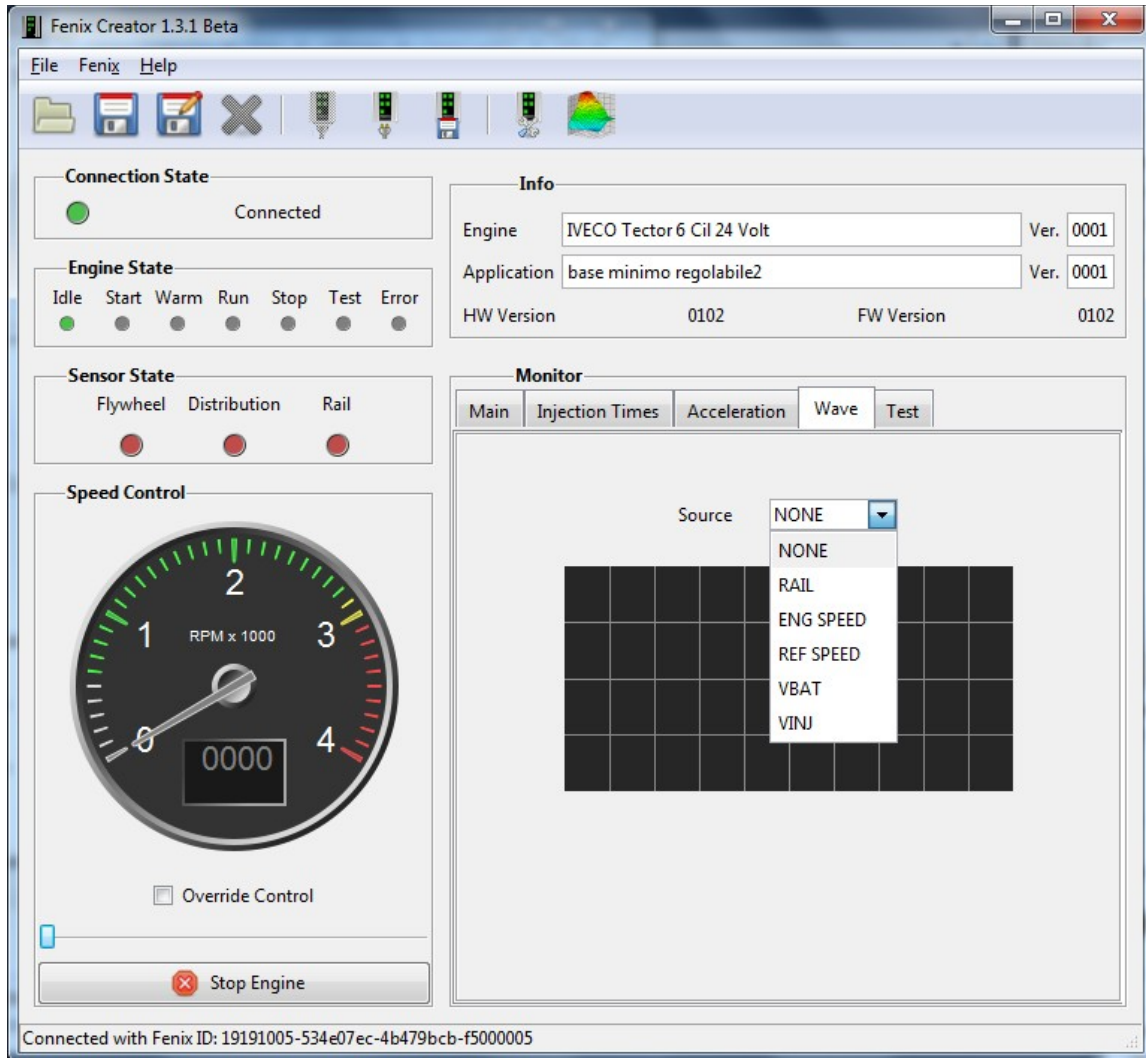
### Accelerations



The "Accelerations" tab show the average angular acceleration of every cilinder useful to diagnose a missing injection problem.



### Wave

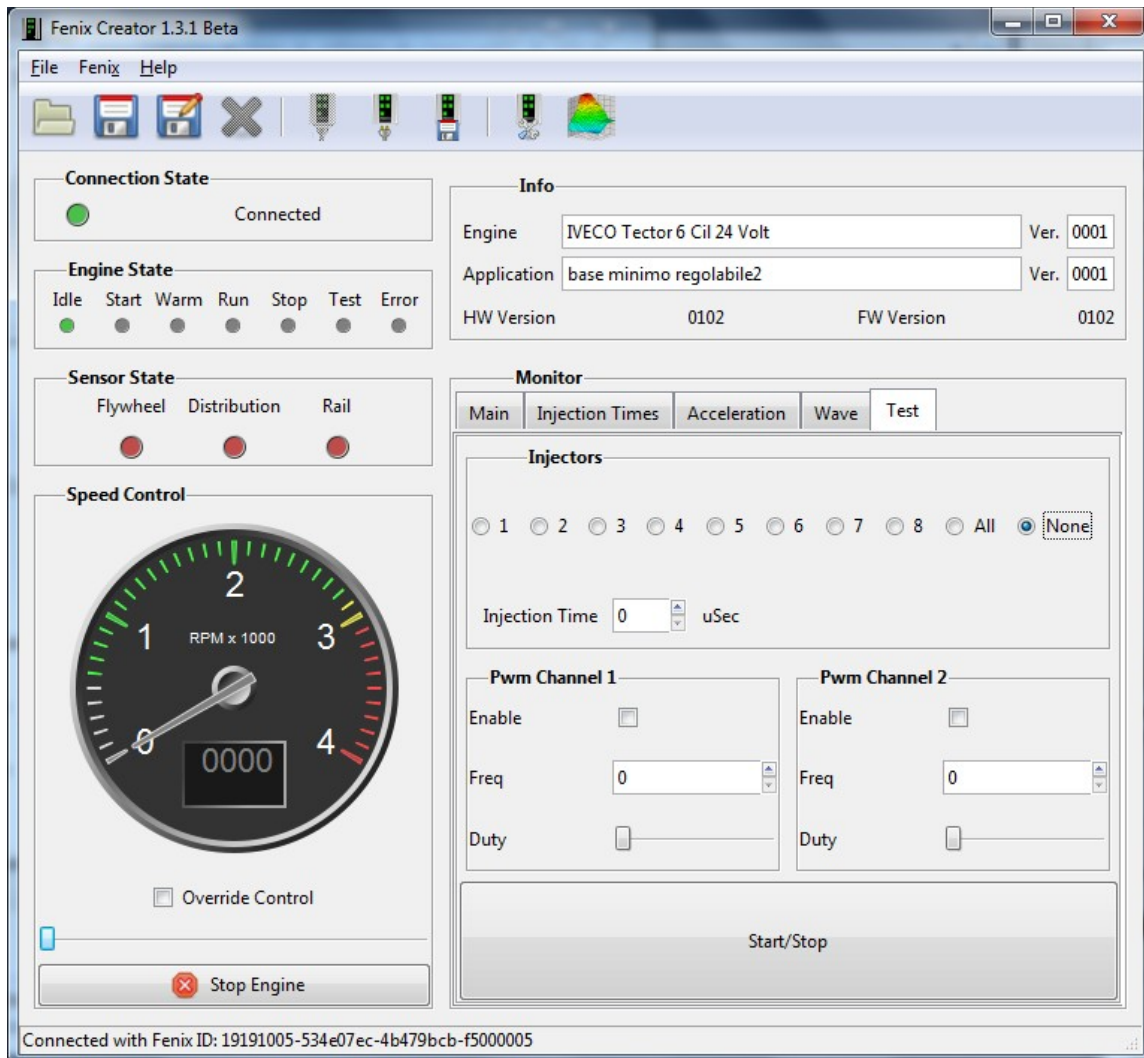


The "Wave" tab acts as an oscilloscope recording 30 seconds of various sensors and engine parameters, useful to diagnose one time and/or spike problems.





### Test



The "Test" tab permits to test injectors and power pwm outputs. It is only operative while the engine state is "IDLE" meaning ready to start.



## Config window

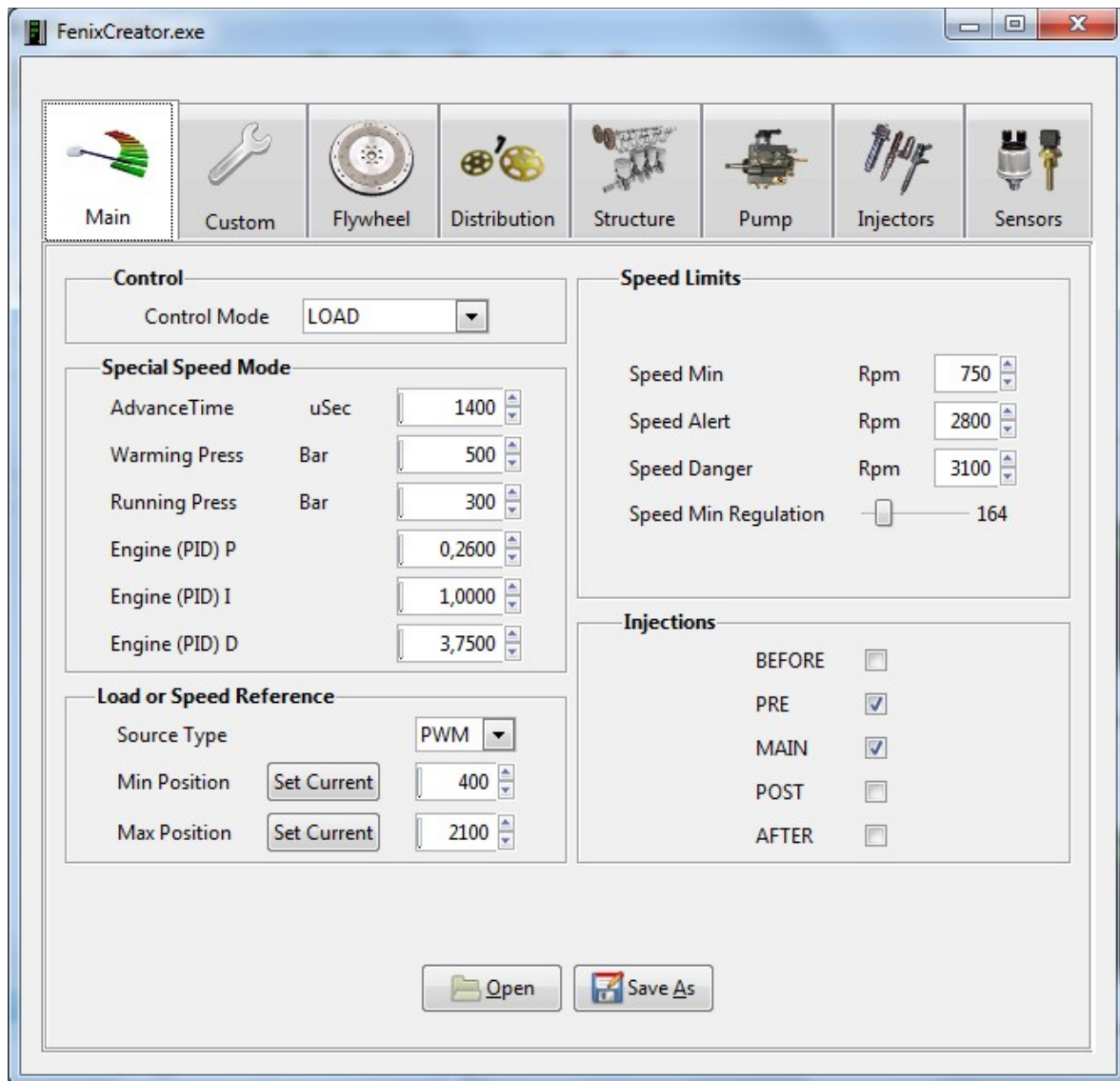
From this window you can configure all the engine structure and components, it is composed of several functional tabs:

- Main
- Custom
- Flywheel
- Distribution
- Structure
- Pump
- Injectors
- Sensors

in the following pages you will be introduced to the core of Fenix configuration.



### Main

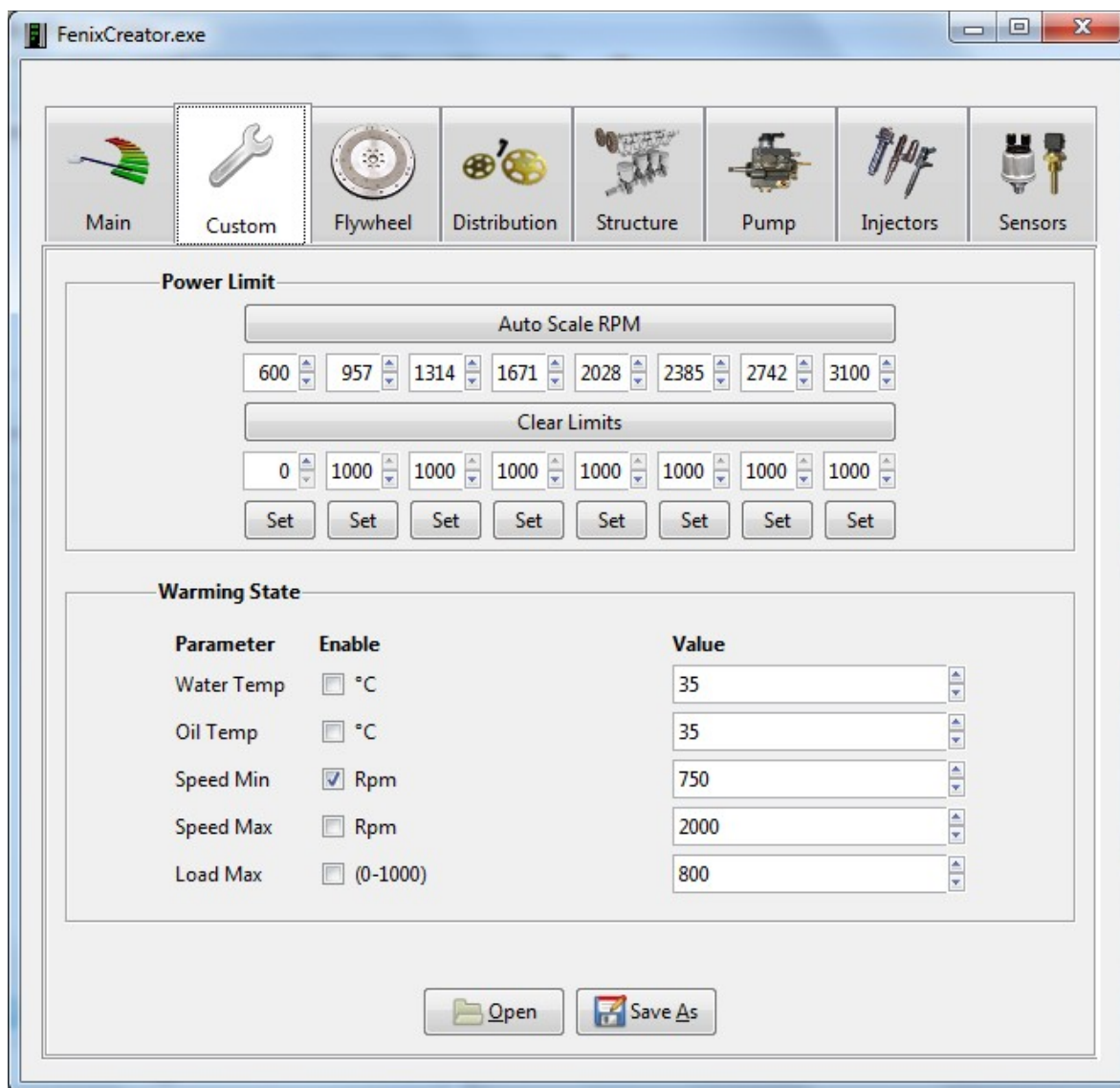


The "Main" configuration tab define:

- the control mode (load, speed by pid or speed by load)
- some basic parameters for the special speed by pid control mode
- speed limits
- load or speed reference type, source and positions (accelerator pedal or manual)
- injections to be enabled



### Custom

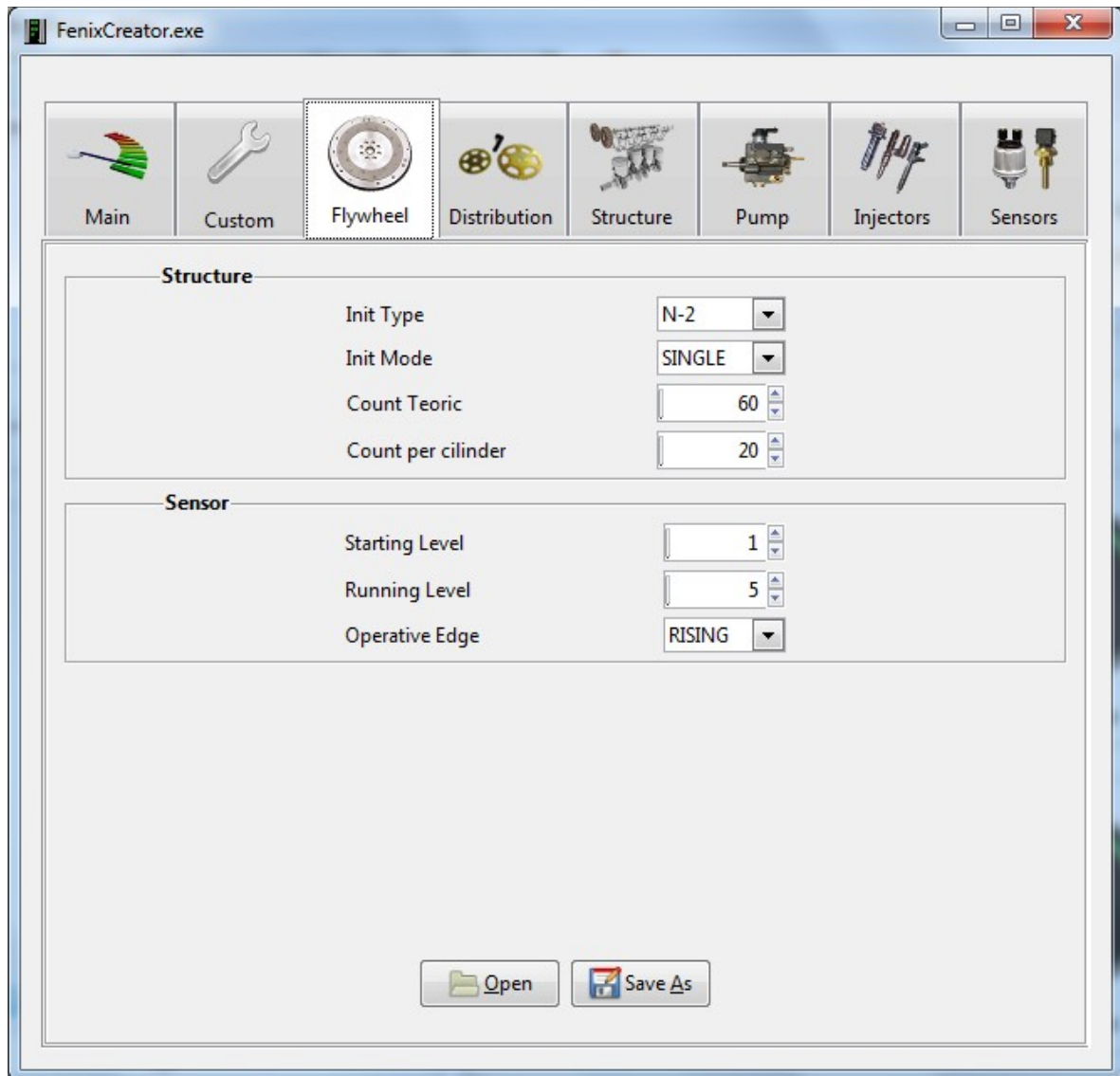


The "Custom" tab is devoted to:

- power limit
- warming state conditions and limits



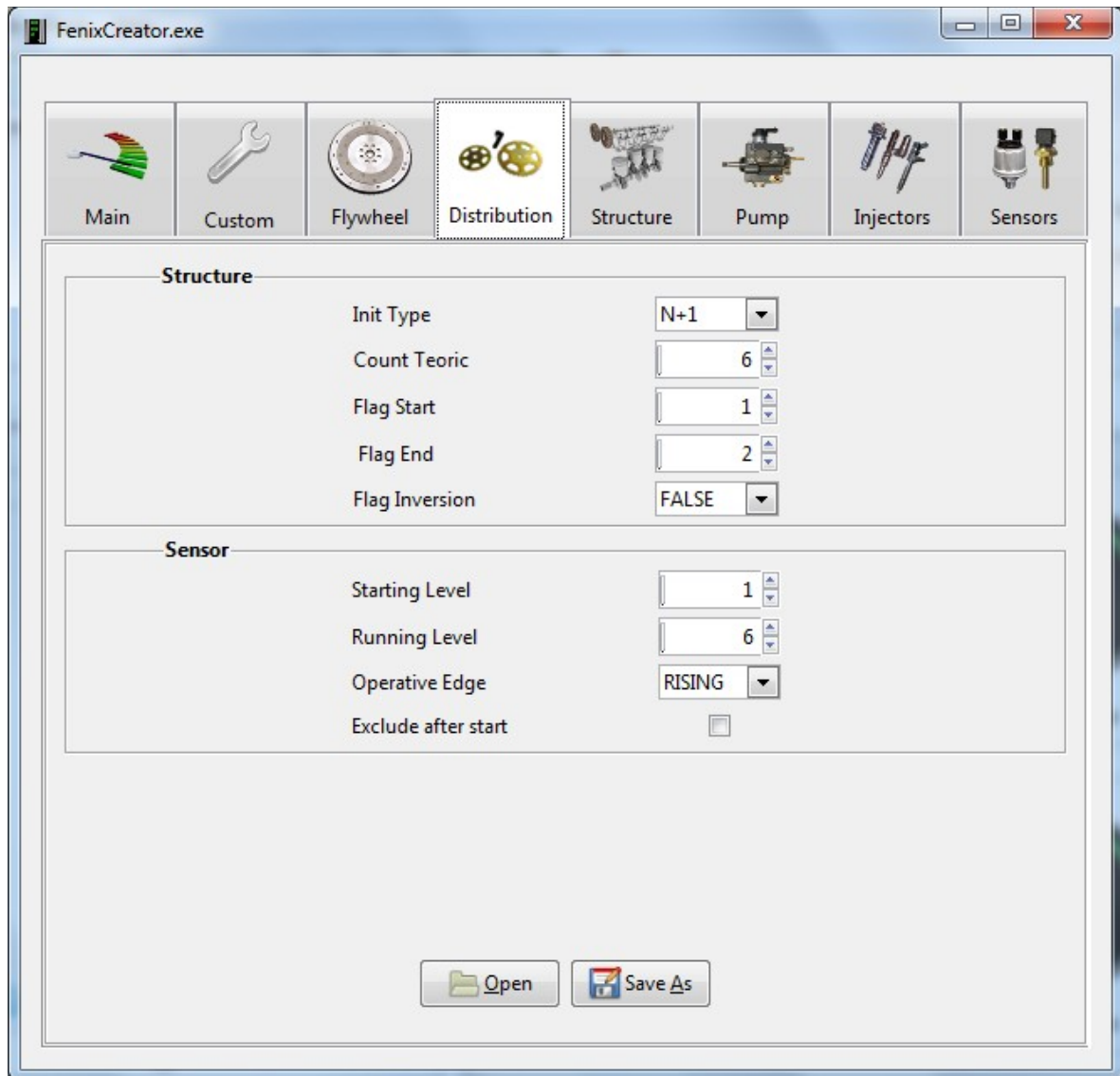
### Flywheel



Into the "Flywheel" tab you define the structure of the flywheel and how Fenix as to operate with this informations.



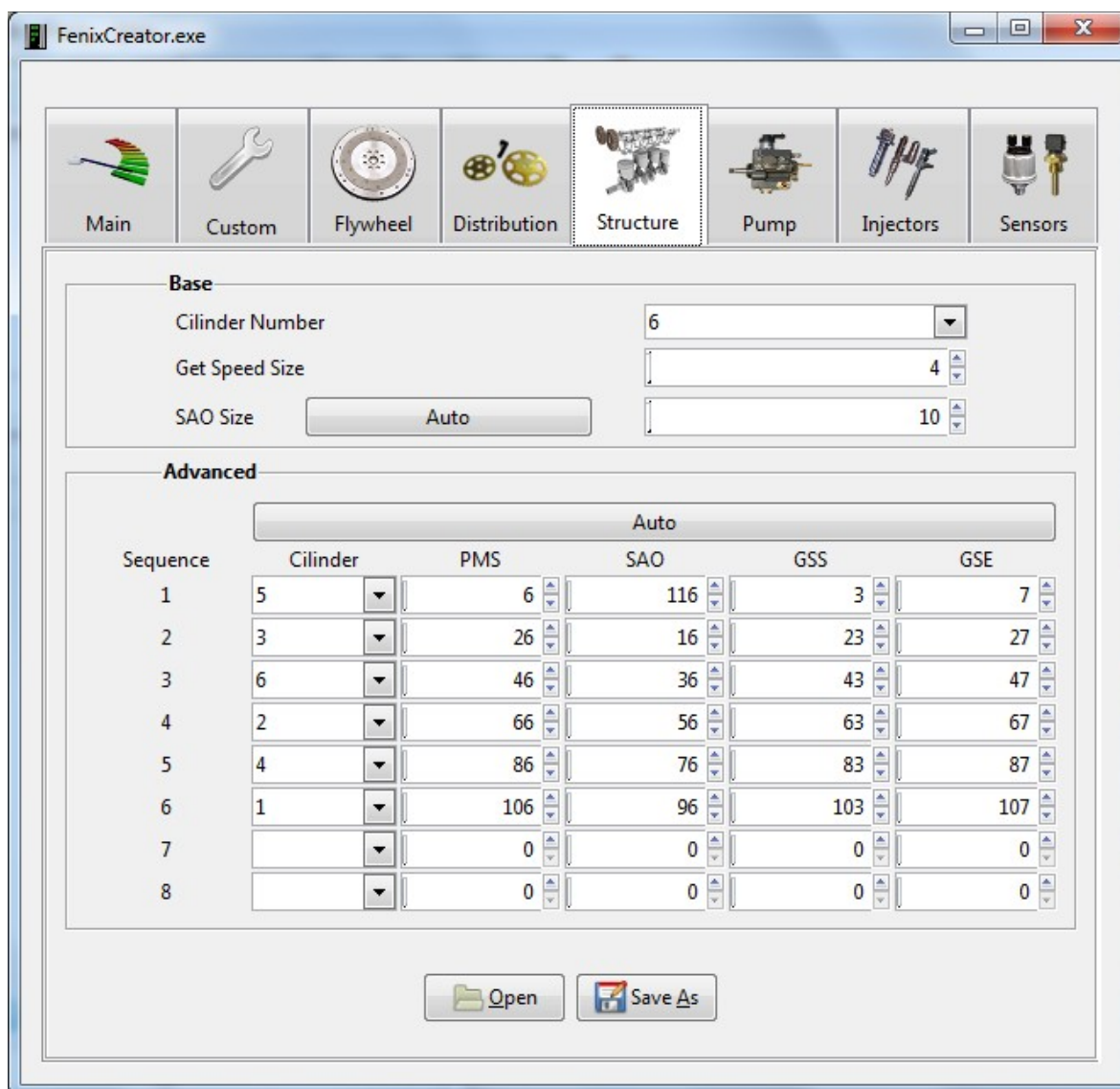
### Distribution



Into the "Distribution" tab you define the structure of the distribution wheel and how Fenix as to operate with this informations.



### Structure

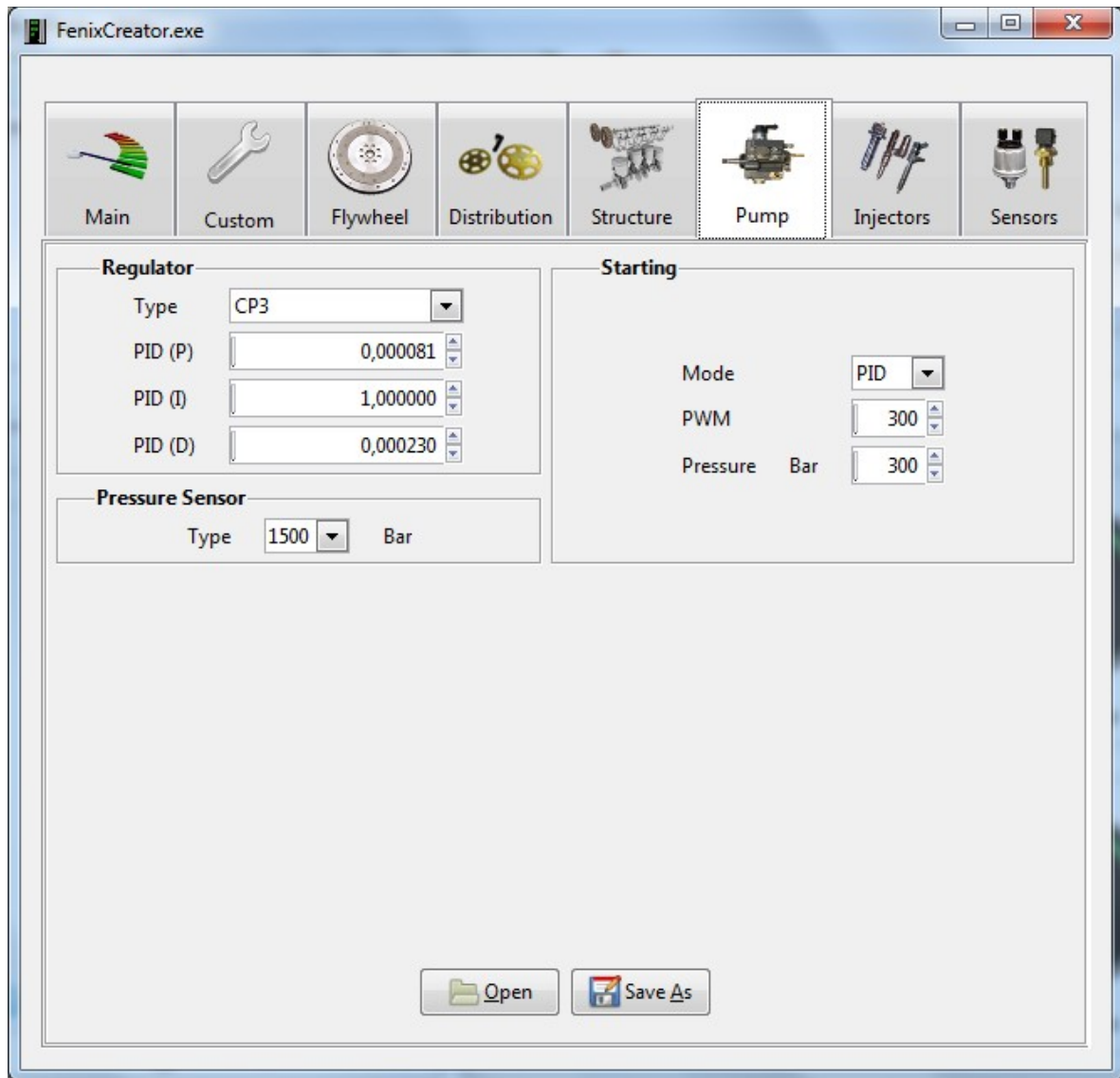


The "Structure" tab is one of the more important, here you define the engine structure:

- number of cilinders
- injection order
- TDC points
- max advance points
- speed mesurement points



### Pump



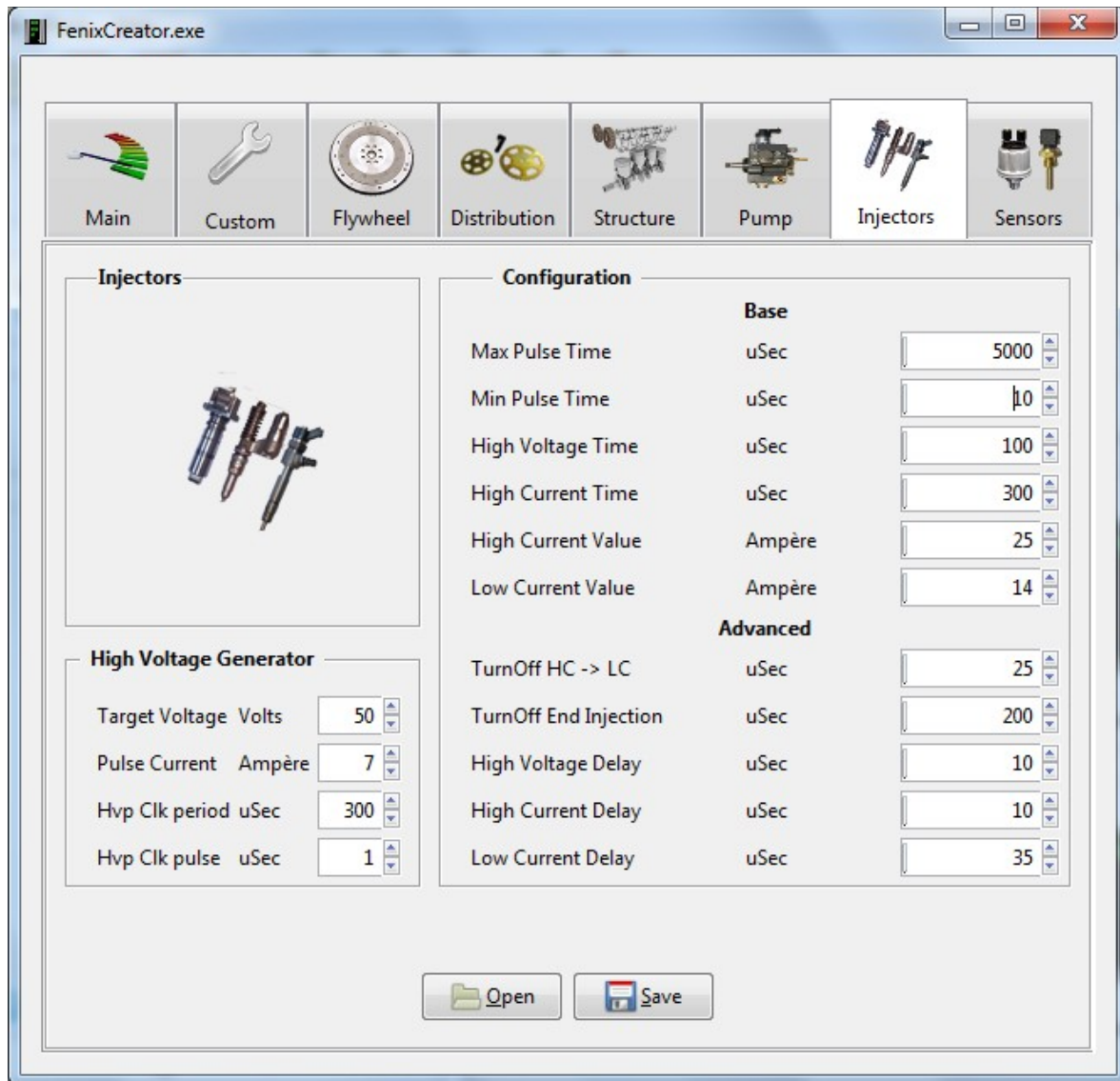
The "Pump" tab enable configuration of high pressure pump for common rail engines, simply select the pump and sensor type.

Read the "Inside PID Calculation Tutorial" to understand the meaning of these parameters.





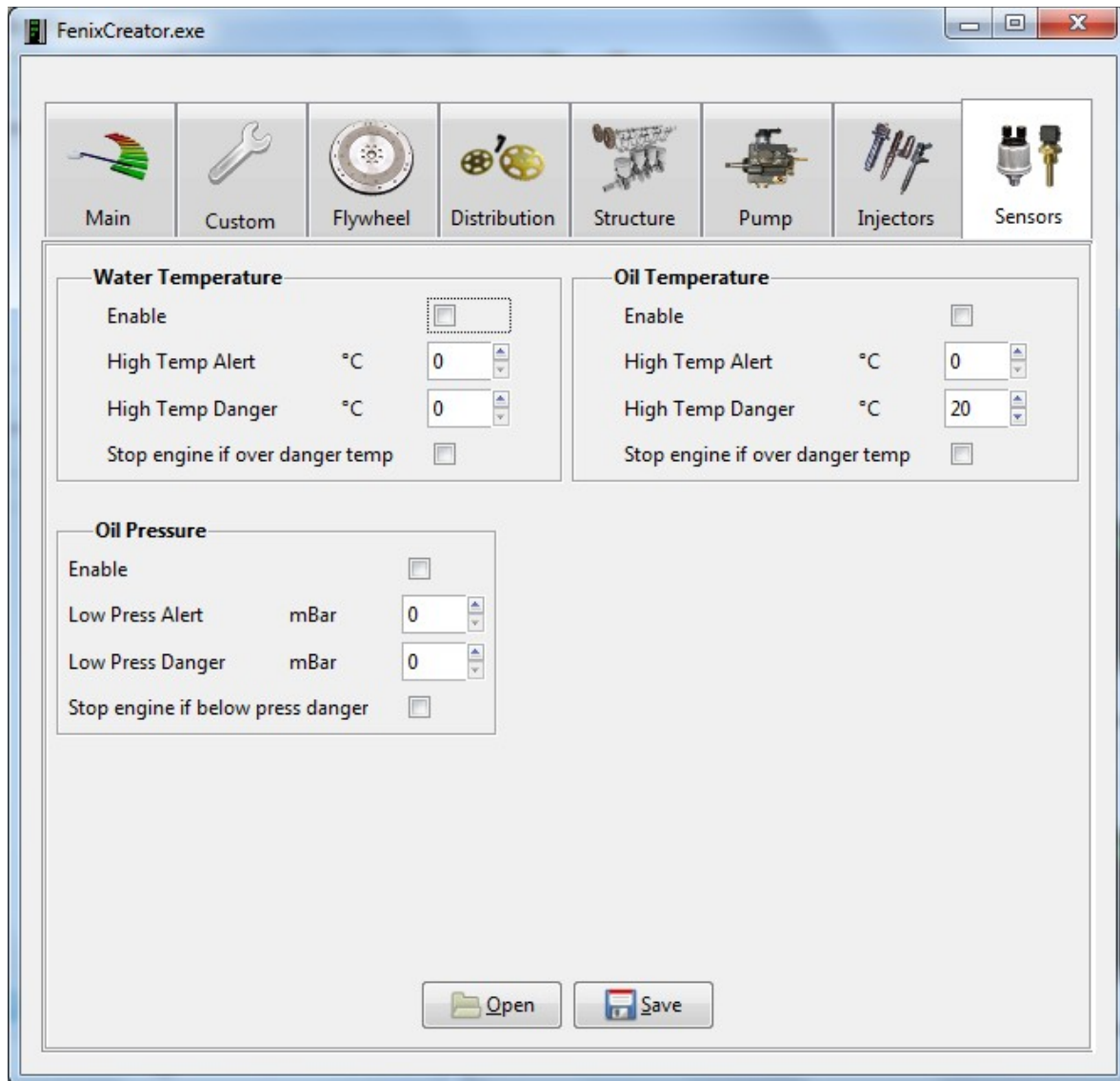
### Injectors



The "Injectors" tab enable configuring every parameters of injector's current profile. Read the "Injector Current Profile Tutorial" to understand what every parameters mean and how to create a current profile step by step.



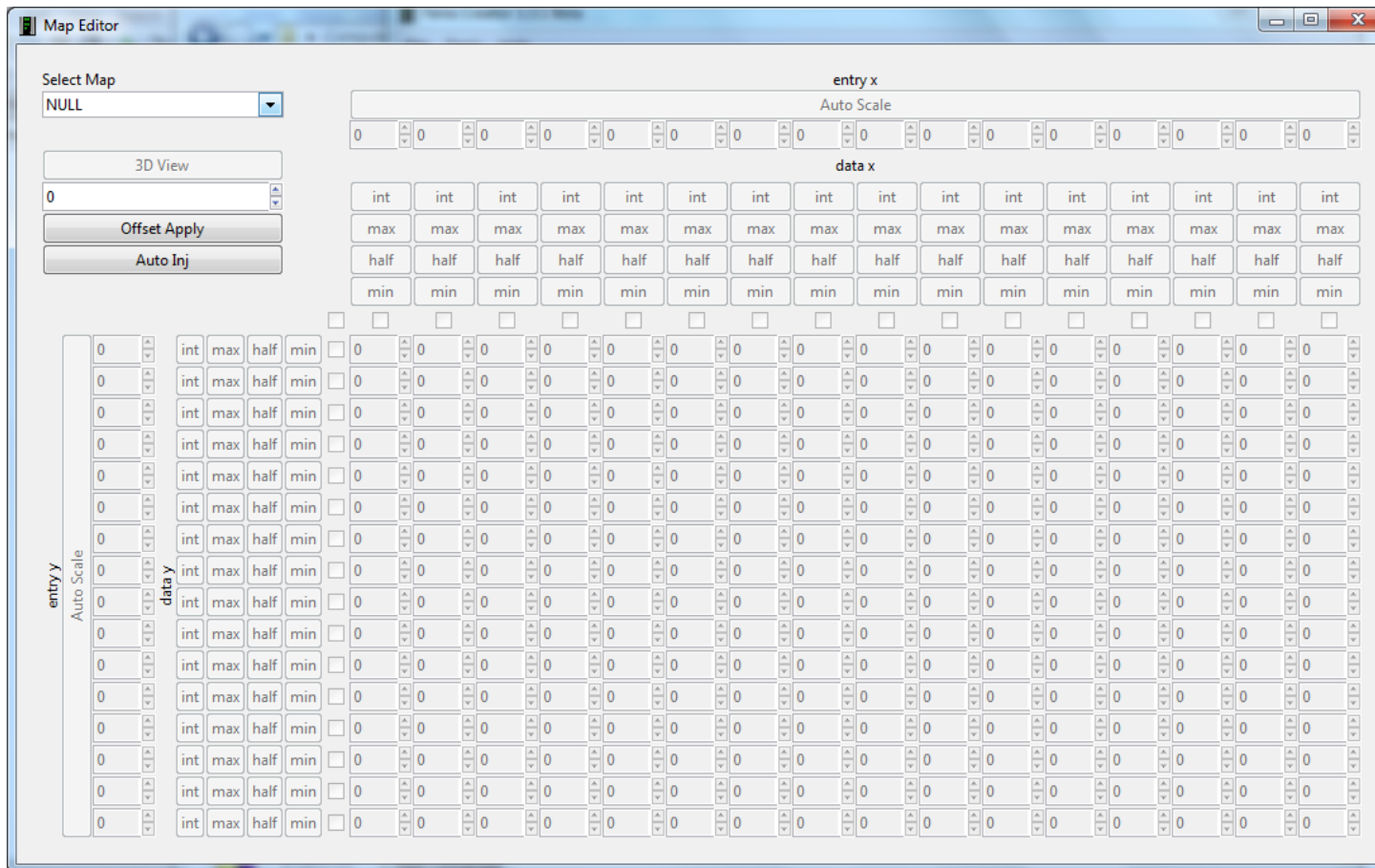
### Sensors



Into the "Sensor" tab you can enable/disable temperature and pressure sensors, set limiting and security values, and as well enable/disable the stopping of the engine if something is going wrong.

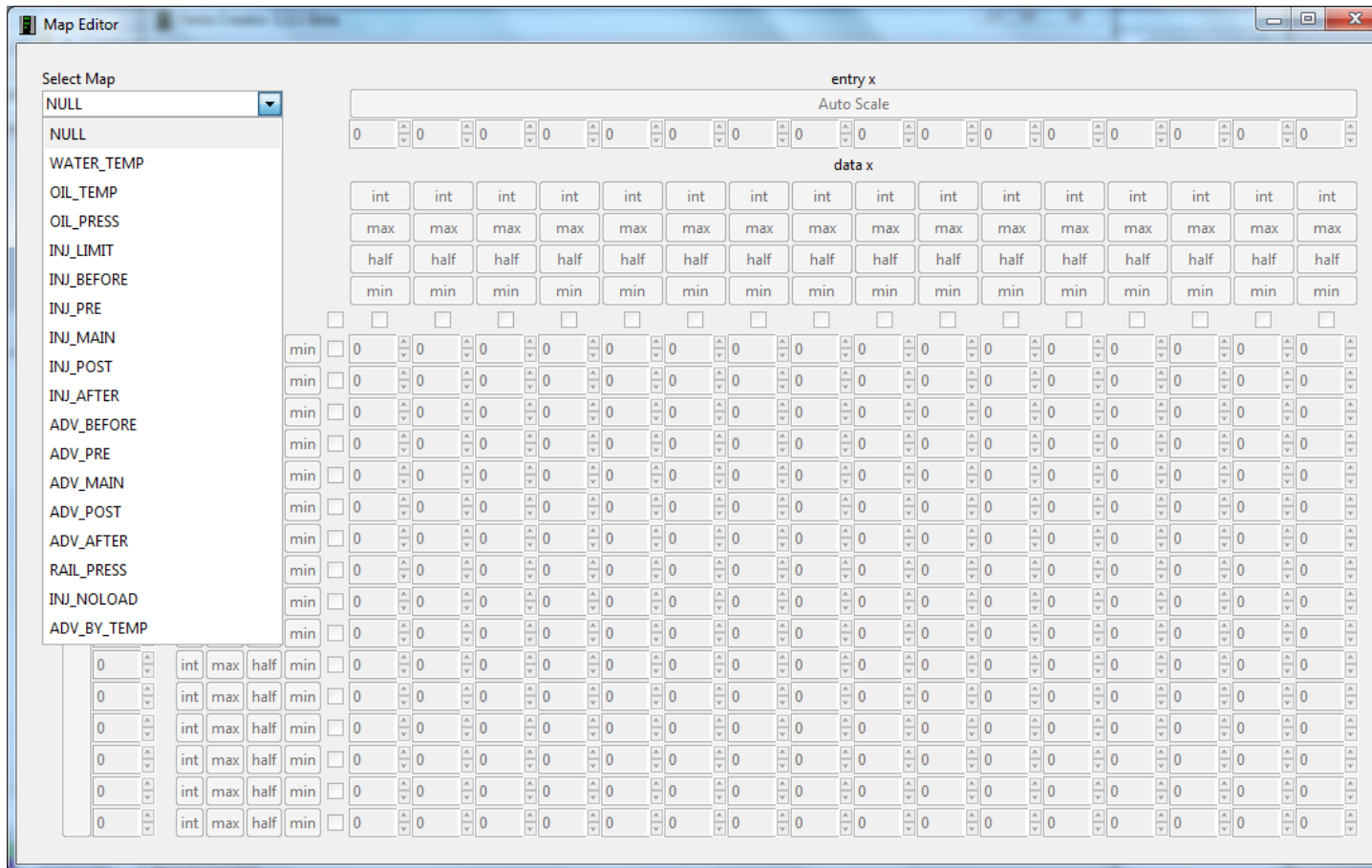


# Map Editor Window



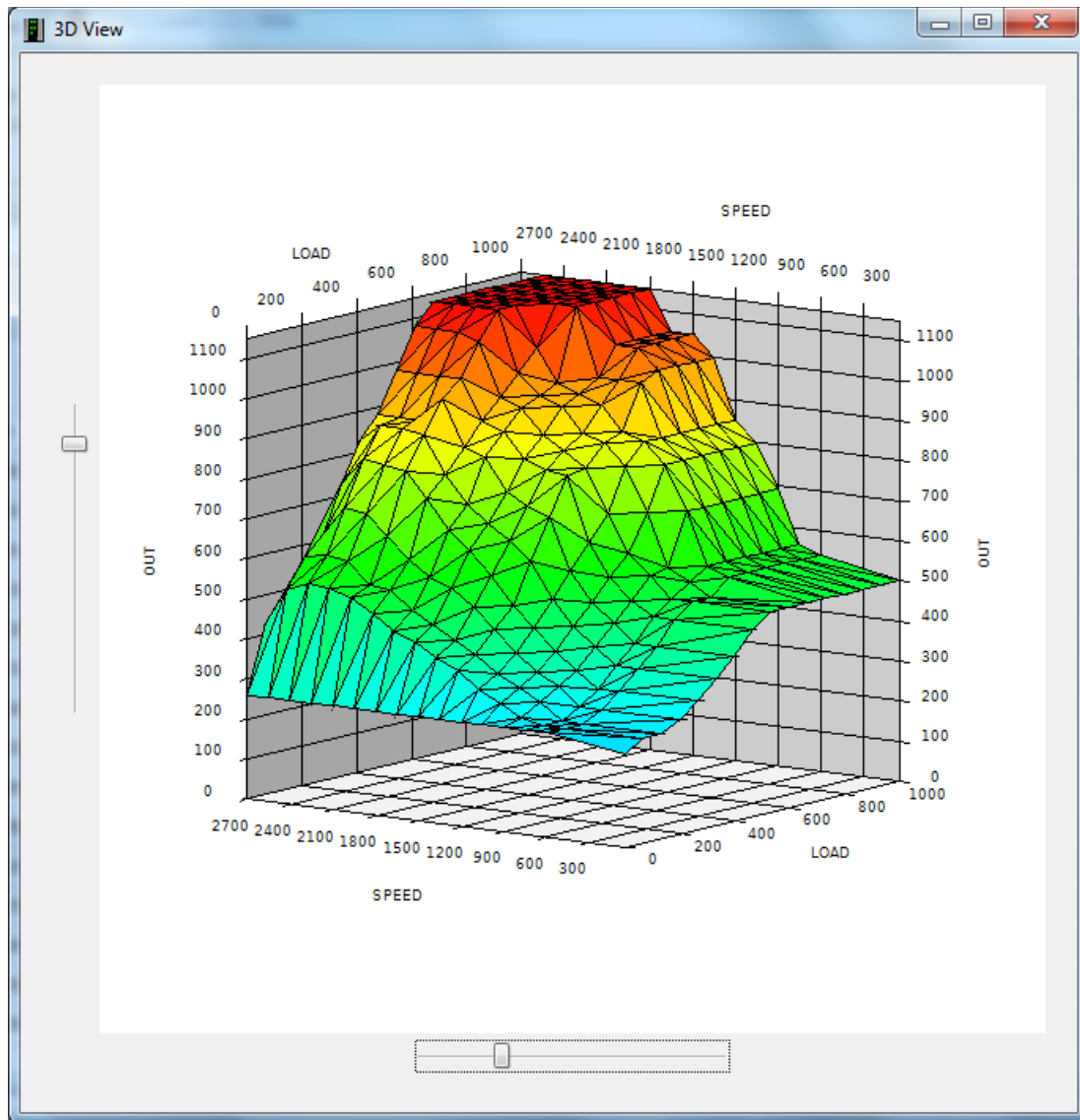


### Map Editor Window (map selection)





### 3D Map Viewer



The 3D Map viewer with two sidebar enable a quick and intuitive analisis of data distribution and regularity.