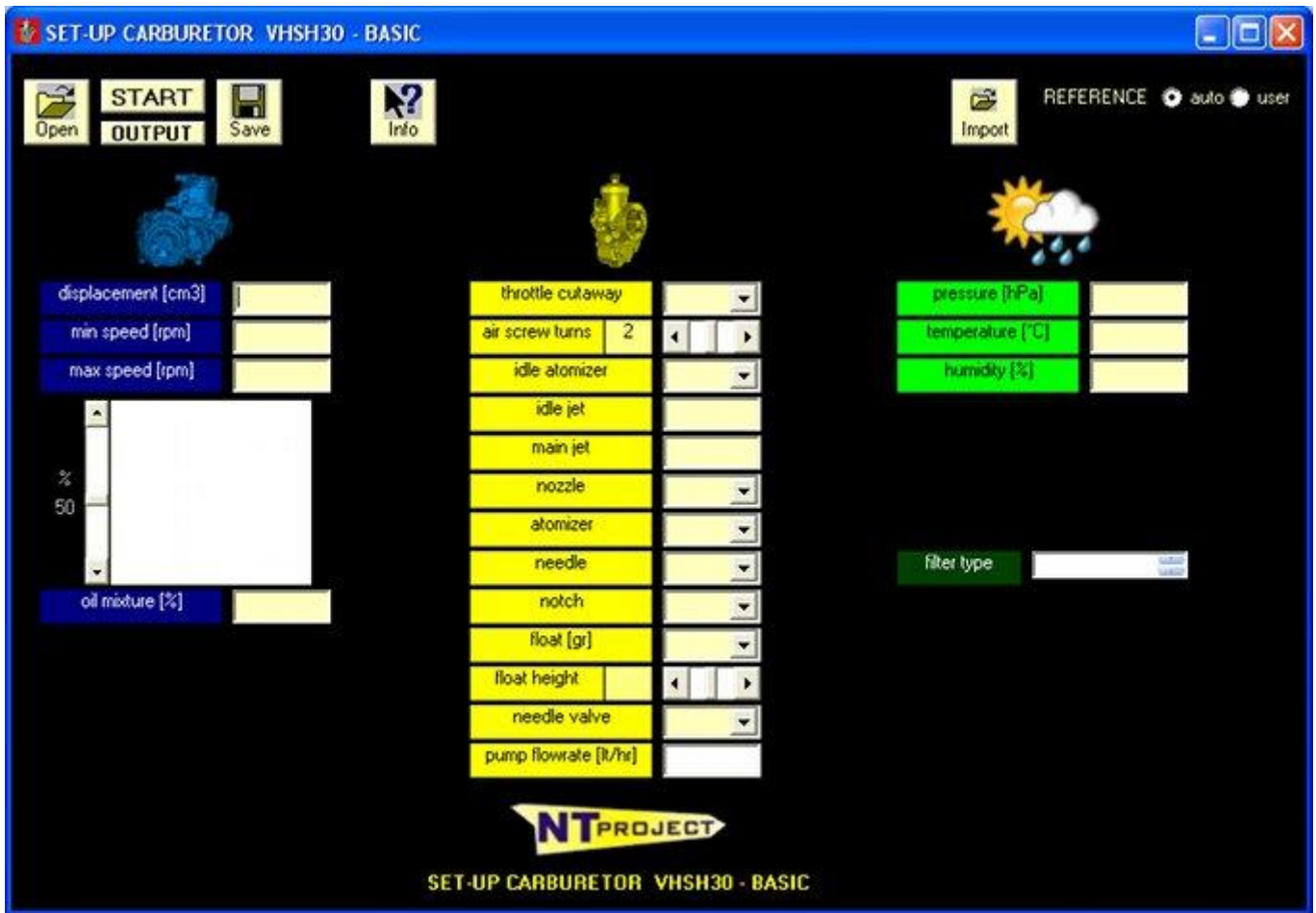


# SET-UP CARBURETOR *Basic*



2/9

## OPTIMUM JETTING CALCULATION ACTING ON ALL THE CALIBRATION ELEMENTS

The software SET-UP Carburetor calculates the response of the carburetor taking into account all the elements of calibration. In fact, the carburetor, even if it fails to do what an injection electronics, over the years has always been evolved and presents many calibration elements that allow you to fine-tune the carburation in many specific areas of functioning in such a way as to satisfy at the best the engine demands. Thanks to the software SET-UP Carburetor you can see how each element affects the carburation and act to obtain improvements right where it is necessary to obtain an optimal jetting in any condition.

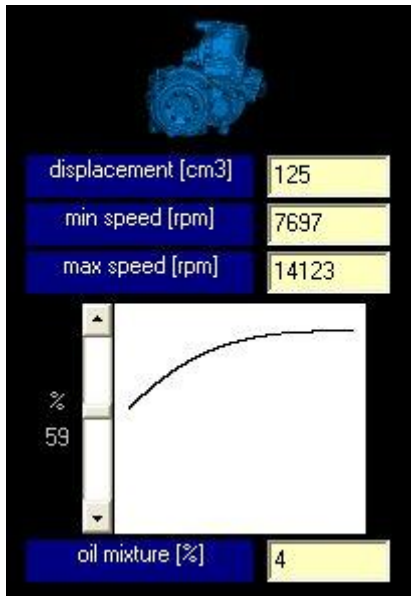
For each model of carburetor has made a special study and has been realized a specific software that contains all the calibration elements that there are at catalog for the carburetor (slide, emulsion tubes, nozzle, needles, atomizers, floats, needle valves, etc.).

You must simply select and enter the elements of calibration that you have initially, or that you want to test.

The image refers to the Dellorto VSH30 which is one of carburetors with more calibration elements, but for carburetors with Power Jet (PHBH, VHSG, etc.) the software will also take account of this and so on to the specific characteristics of every single carburetor.



## SET-UP CARBURETOR *Basic*



### OPTIMUM JETTING CALCULATION BASED ON REAL CONDITIONS OF ENGINE OPERATION

As is known carburetor reacts differently depending on the request of the engine, therefore, according to the actual conditions of operation is necessary a specific calibration to obtain the carburation most suitable in those conditions.

The software SET-UP Carburetor lets you take into account all this information and insert according to the characteristics of the track and of the driving style, the RPM range where is working on your engine, and the progress of the power curve in that range.

In this way the jetting that is calculated will be the solution optimal for those operating conditions.

### OPTIMUM JETTING CALCULATION BASED ON TYPE FILTER

The characteristics of the filter change the pressure conditions in which works the carburetor and consequently the response that delivers according to the demands of the engine.

For this reason NT-Project has analyzed the characteristics of filters used in the different categories and with different engines (in the image there is one of the filters of the category KZ kart) and has inserted them directly into the software SET-UP Carburetor.

Thanks to this you can quickly find the optimal jetting with the filter used and if you change it with another model, you can quickly see how change the calibration for the new filter.



### OPTIMUM JETTING CALCULATION IN ALL WEATHER CONDITIONS

In a 2-stroke engine the carburetion is essential to have fully potential and performance of the engine, in fact the achievement of optimum temperatures in the combustion chamber and in the exhaust system is what allows you to get maximum efficiency possible for the engine.

As is known to changing atmospheric conditions is necessary recalibrate the carburetor so that it continues to provide the optimum carburetion under the new conditions.

In the software SET-UP Carburetor this aspect has been very cared for and allows you to quickly find the new jetting to always have the best performance for your engine.

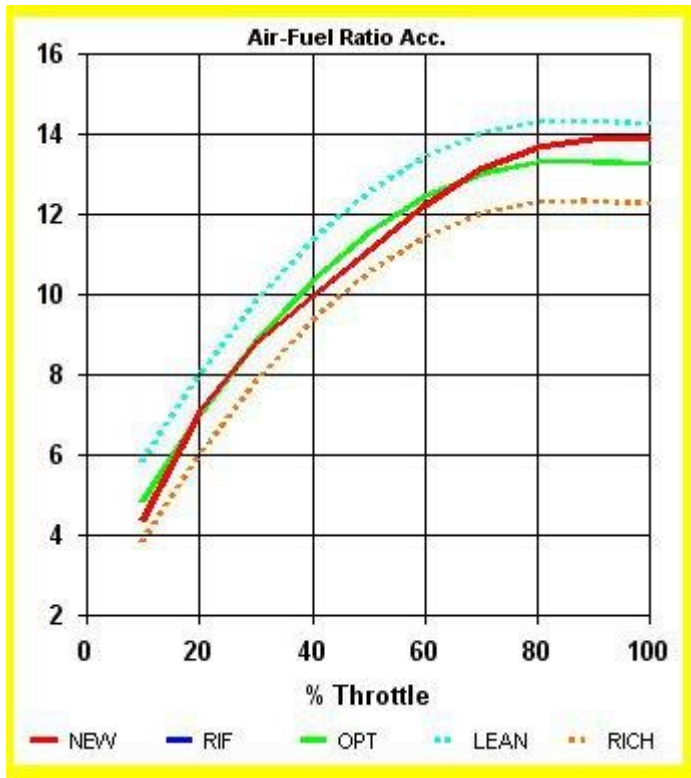
In fact in the software is sufficient enter the pressure, the temperature and the humidity, and immediately you will see how it is your carburetion and how to change the jetting for each weather conditions.



# SET-UP CARBURETOR *Basic*

## CARBURETION CALCULATION and JETTING MODIFICATION

After entering into the software the calibration data that you've in your carburetor that you want testing, together with the operating and the weather conditions, clicking the START button software SET-UP Carburetor calculates the carburetion that your carburetor determines.



This carburetion is compared with that which the carburetor should provide to allow the engine to have the maximum performance.

In fact, in a 2-stroke engine with carburetor admission the air / fuel ratio which allows to obtain the best performance varies depending on the operating conditions (throttle opening butterfly, engine speed) in that it must take into account, for example, of the incomplete vaporization of the mixture which there is a low load, or of the additional demand of fuel that is necessary at high speed, etc.

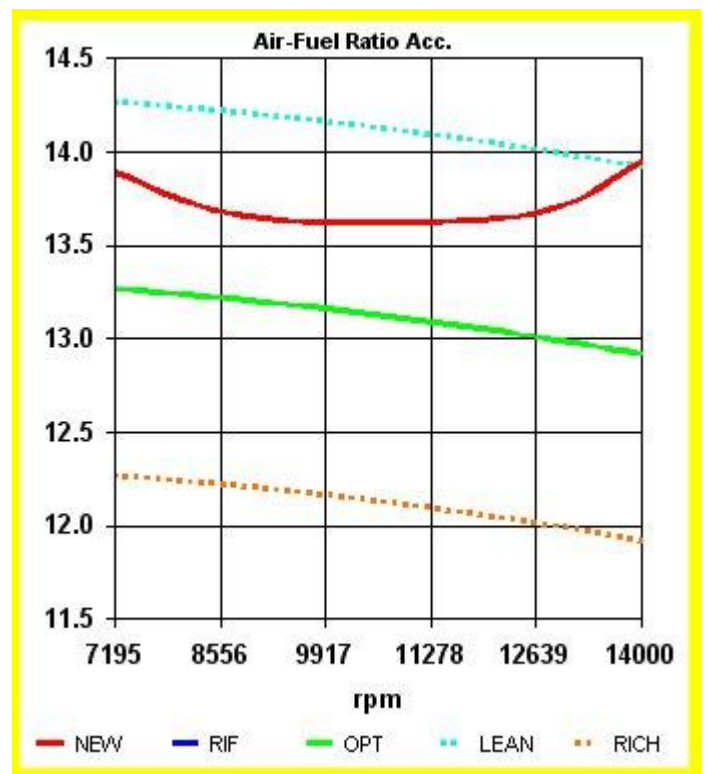
The comparison is done both at partial loads (in the different throttle openings), both at full load (in all speed of operation), thus it will be possible to optimize the jetting in all operating conditions and therefore have maximum performance at all points of the track and in all the driving conditions.

The green line is the optimum carburetion for the engine, while the red line is the carburetion that carburetor gives with the calibration that you've entered, so already just looking at the graphs understands immediately what are the points to be improved in order to obtain the carburetion better for the engine.

In the figure shown for example of the carburetion at the partial loads you see that you have a good carburetion in first opening, then the carburetion is a bit richer than it should be, until it becomes lean in the transition.

While in the figure relative to the carburetion at full load you can see that with the calibration inserted the carburation is lean in all the operation range.

In addition to the green and red lines the software also shows lines which indicate the limits of lean carburetion (light blue) and of rich carburetion (orange), beyond which it is not advisable in any case go to avoid reliability problems or malfunction.





In addition to graphics software SET-UP Carburetor immediately recommended interventions to be made to correct the jetting and close as possible to the optimum carburetion

LOAD 0-50% MIXTURE RICH -2.9% INCREASE THROTTLE CUTAWAY - DECREASE IDLE JET - TO UNSCREW AIR SCREW  
 LOAD 50-100% MIXTURE LEAN 2.3% INCREASE ATOMIZER - PUT UP NEEDLE  
 FULL LOAD MIXTURE LEAN 4.5% INCREASE MAIN JET

In fact, for every operating condition the software SET-UP Carburetor will indicate the situation (rich mixture, lean, or ok), the percentage of the deviation from the optimum value, and especially how to act to improve the situation in the different zones, indicating for first the calibration element most influential in that area and to follow the others that affect.

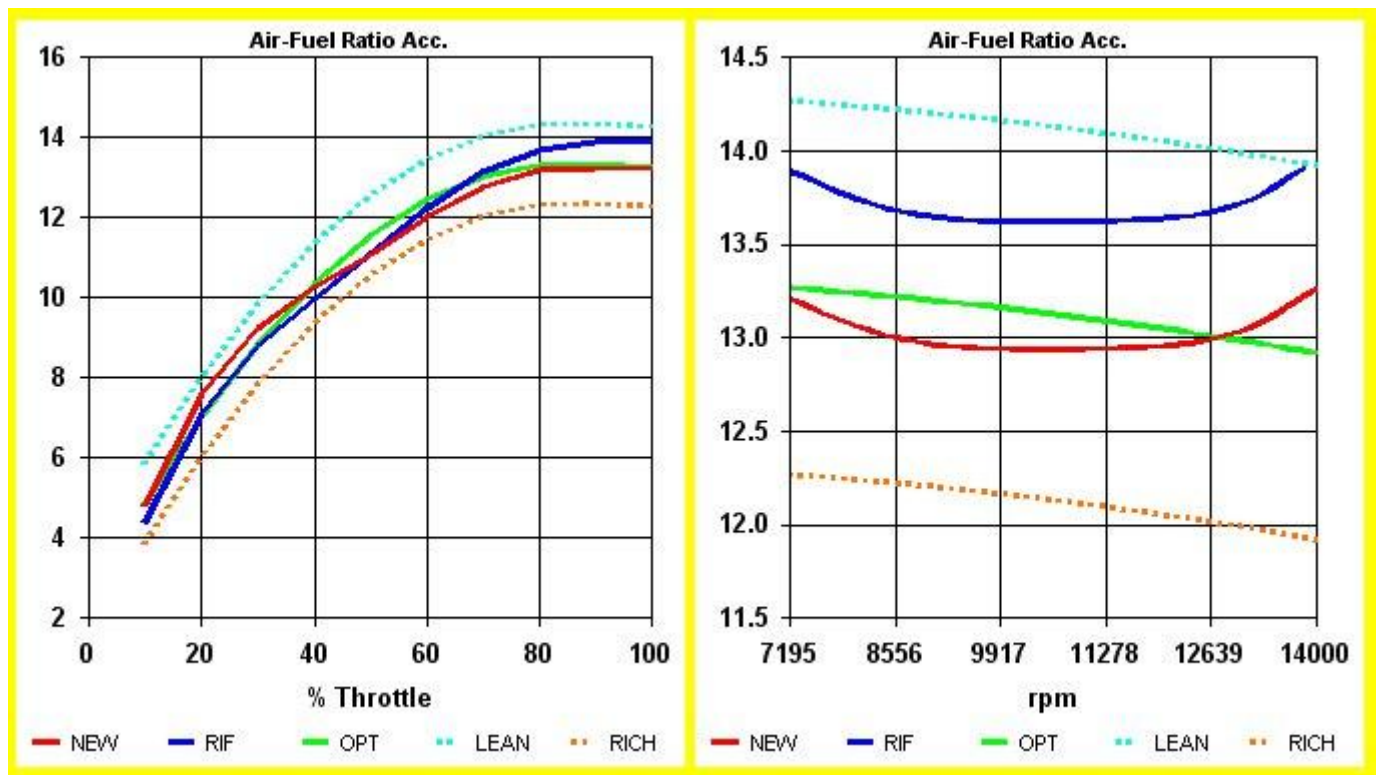
6/9

## SET-UP CARBURETOR *Basic*

### CARBURETION CALCULATION and JETTING MODIFICATION

LOAD 0-50% MIXTURE RICH -2.9% INCREASE THROTTLE CUTAWAY - DECREASE IDLE JET - TO UNSCREW AIR SCREW  
 LOAD 50-100% MIXTURE LEAN 2.3% INCREASE ATOMIZER - PUT UP NEEDLE  
 FULL LOAD MIXTURE LEAN 4.5% INCREASE MAIN JET

Based on information provided by the software SET-UP Carburetor in within seconds you change the initial jetting and you get that that provides the optimum carburetion for the engine.



In the graphs you can see how was the carburetion with the jetting initially inserted (blue line) and that due to the jetting modified (red line), which must be as close as possible to that of the optimum carburetion.

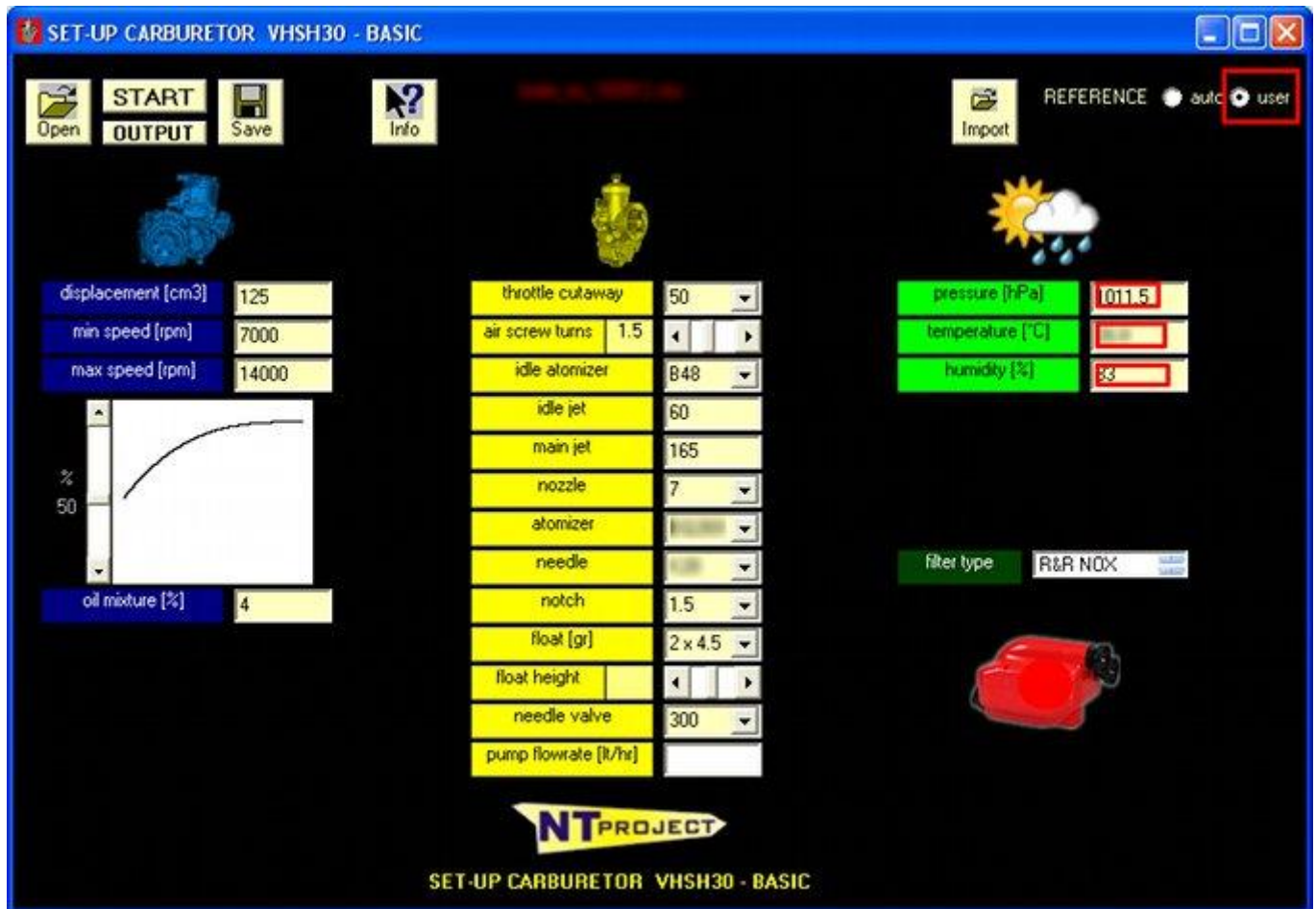
LOAD 0-50% MIXTURE OK -1.1%  
 LOAD 50-100% MIXTURE OK -1.3%  
 FULL LOAD MIXTURE OK -0.7%

Thanks to the changes suggested by the software you make corrections to the jetting in order to have the best combination of optimum carburetion both at partial loads, both in the transition, both at full load.

# SET-UP CARBURETOR *Basic*

## REFERENCE JETTING

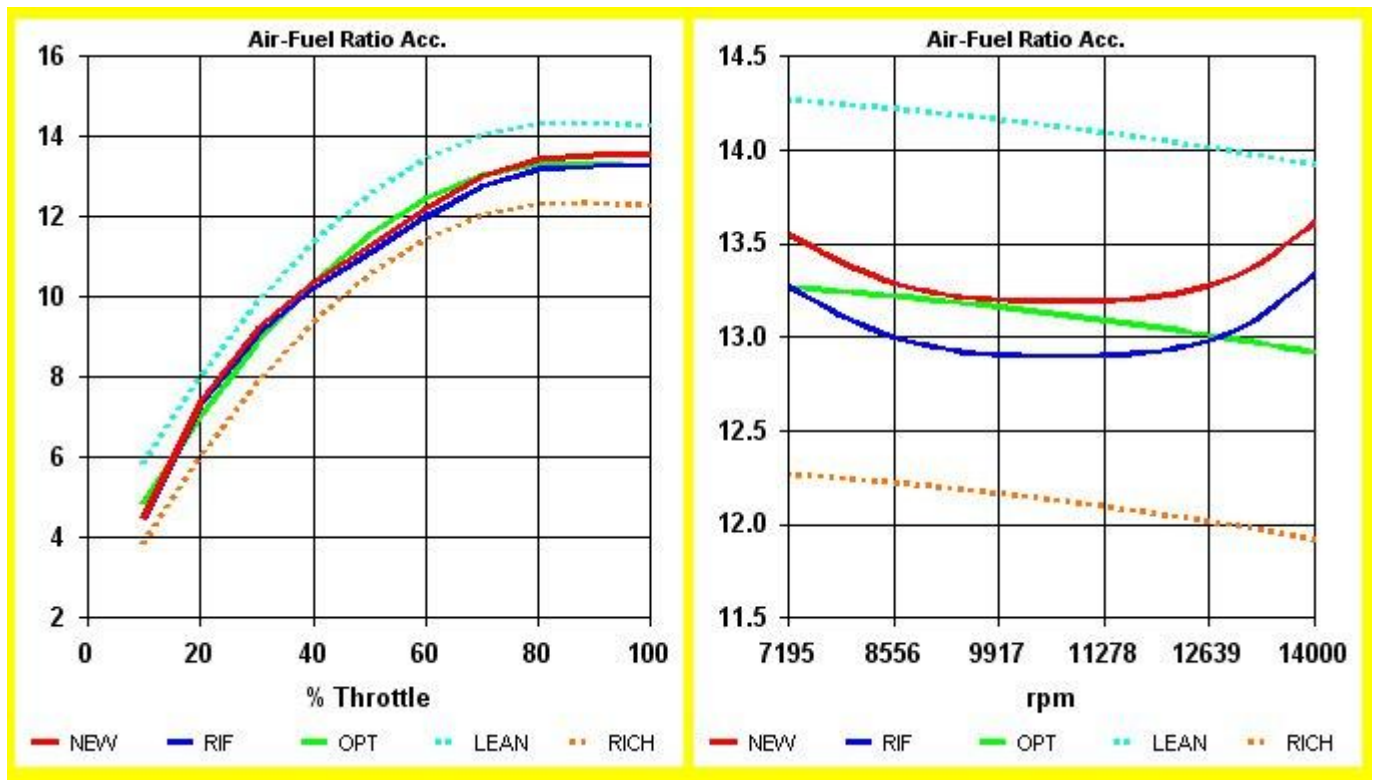
If you have found a jetting that provides a carburetion found to be particularly suitable for an engine or for the style driving of a driver, or on a particular track, the software SET-UP Carburetor gives you the opportunity to take this carburetion how reference and use it to get all the indications of modification. You'll just have to open the file with the your setting, select the "user" before making the calculation and then for example update the data of weather or other data.



When doing the calculation the software SET-UP Carburetor will show you the graphs putting your carburetion of reference (blue line) and the new (red line) due to changes you have made (for example, new weather conditions)

Moreover, the software SET-UP Carburetor will give the indications on how to change the jetting to return to your carburetion you have taken as a reference.

LOAD 0-50%	MIXTURE OK 1.7%	
LOAD 50-100%	MIXTURE LEAN 2.0%	INCREASE ATOMIZER - PUT UP NEEDLE
FULL LOAD	MIXTURE LEAN 2.2%	INCREASE MAIN JET



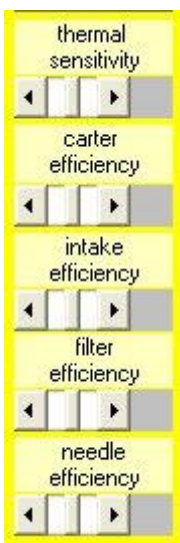
8/9

## SET-UP CARBURETOR *Basic*

### ENGINE - CARBURETOR - FILTER SETTINGS

Each engine has specific characteristics that influence in significantly the response of the carburetor. NT-Project thanks to his experience of analysis and simulation fluid dynamics analyzes the different types of engines, based on the characteristics, the levels of tuning, etc. and sets in software the corresponding parameters in such a way that the customer can immediately obtain the optimum jetting for the characteristics of its engine.

In the racing often happens, however, to make continuous developments at the engine, or to change the model of the engine, etc. for this reason in the software SET-UP Carburetor there are some parameters that can be manage and that allow you to continue to use the software without any difficulty and to get always the optimum jetting even when making changes.



Besides the changes to the engine, or the change of engine model, it can happen that are made different heat treatments at cylinder that alter the heat transfer and therefore make the engine more or less sensitive to atmospheric conditions, in the software SET-UP Carburetor you can handle this too, allowing you to always have the software configured for your situation.

Same can be said for filters, NT-Project analyzes in advance filter types and their average efficiency, pre-setting these values in the software, however, it may happen that due to wear, position, etc. the performance of the filter changes, for this reason in the software SET-UP Carburetor you can also take into account of this situation and manage it easily.

Finally, it may happen that for processing defects or wear some needles and atomizers do not work more optimally, and if you don't have immediately the ability to replace it, is important to take this into account to correct the jetting accordingly, in the software SET-UP Carburetor this aspect has been taken into account and can be taken into account safely.

**As you can see every aspect is studied in detail for allow you to have at your side a professional instrument to manage over time the jetting and have in each provided the optimum carburetion for your engine and your filter.**

# SET-UP CARBURETOR *Basic*

## SUMMARY FEATURES SOFTWARE SET-UP CARBURETOR BASIC

Finally we summarize the features of the software SET-UP Carburetor Basic compared with those of other software versions.

	<b>BASIC</b>	PROFESSIONAL	EXPERIENCE
OPTIMUM JETTING CALCULATION ACTING ON ALL THE CALIBRATION ELEMENTS	<b>X</b>	X	X
OPTIMUM JETTING CALCULATION BASED ON REAL CONDITIONS OF ENGINE OPERATION	<b>X</b>	X	X
OPTIMUM JETTING CALCULATION BASED ON THE FEATURES OF TRACK, VEHICLE and DRIVER		X	X
OPTIMUM JETTING CALCULATION CHANGING ENGINE SET-UP		X	X
OPTIMUM JETTING CALCULATION BASED ON TYPE FILTER	<b>X</b>	X	X
OPTIMUM JETTING CALCULATION IN ALL WEATHER CONDITIONS	<b>X</b>	X	X
CARBURETION CALCULATION and ADVICES JETTING MODIFICATION	<b>X</b>	X	X
JETTING AUTOMATIC CALCULATION		X	X
JETTING COMPARISON		X	X
REFERENCE JETTING	<b>X</b>	X	X
PRINT DATA and RESULTS		X	X
ENGINE - CARBURETOR - FILTER SETTINGS	<b>X</b>	X	X
FUEL EMULSION CALCULATION			X
CARBURETOR RESPONSE SPEED CALCULATION			X