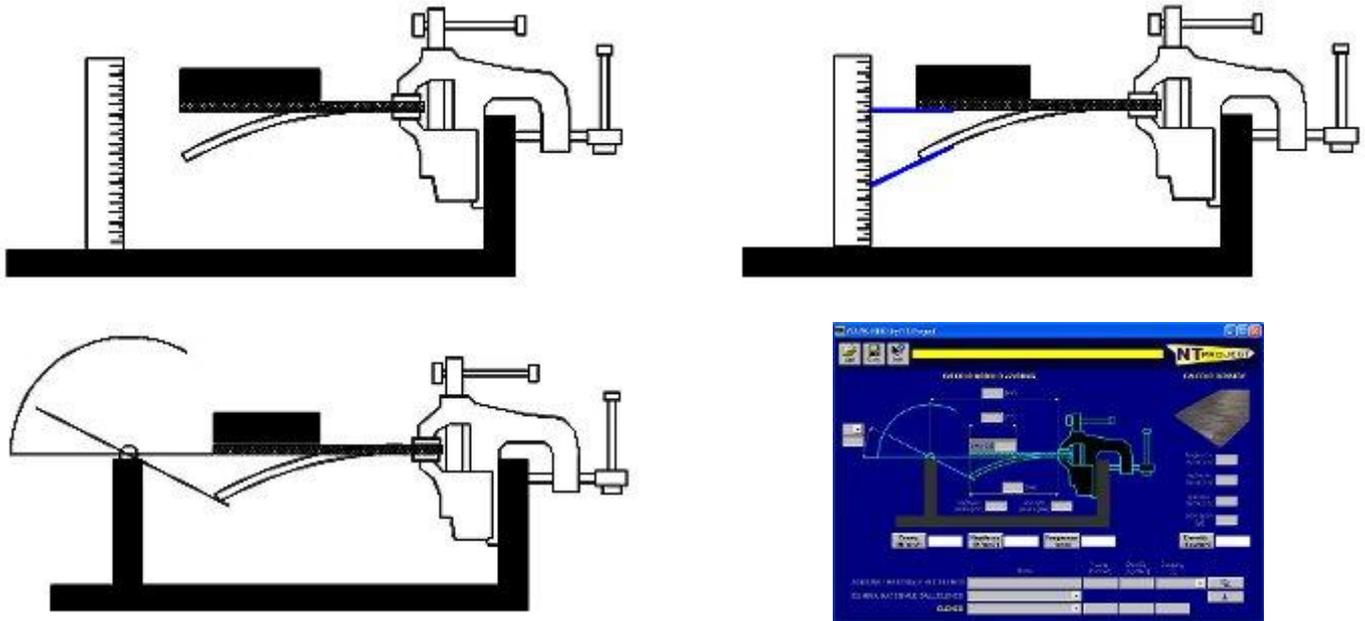


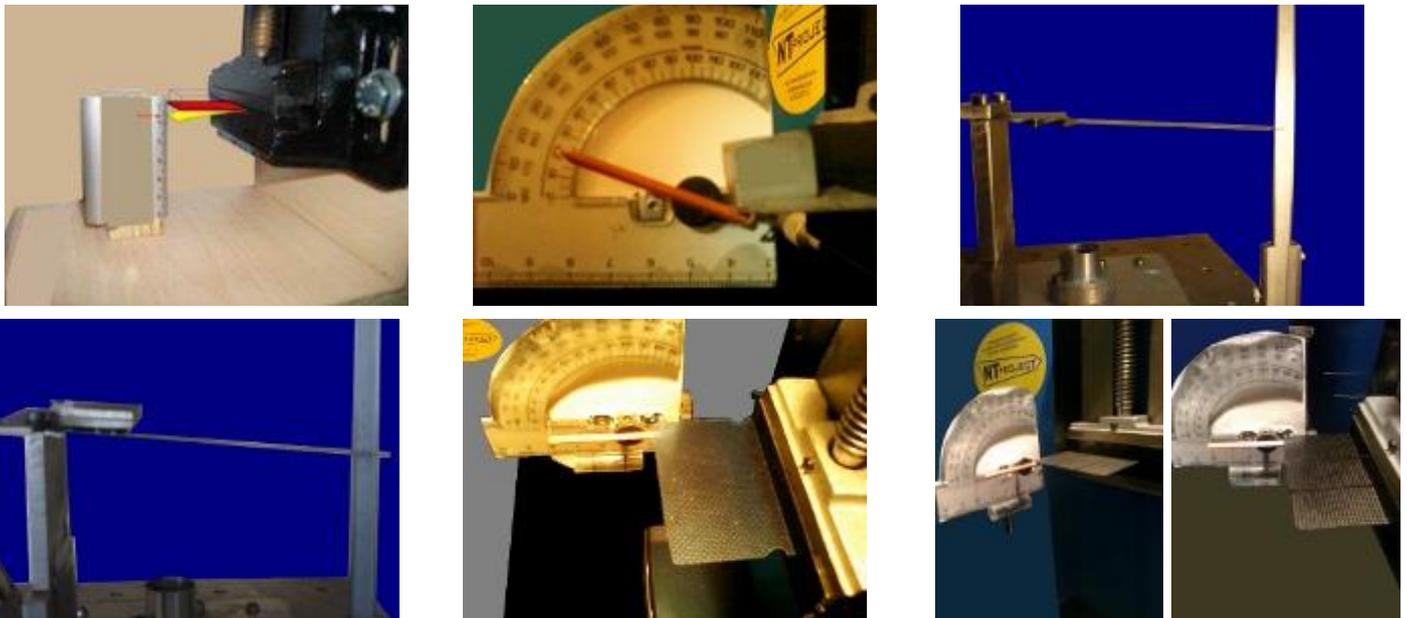
# YOUNG REED - presentation

The software YOUNG REED allows the calculation of Young's or Elasticity Modulus and density of reed petals, then you can understand the quality and the technical features of reed petals. In fact with these values the software calculates the effective stiffness of the reed petal and the rpm speed in which it will resonate, so you can avoid to use reed petals with a wrong material for your engine, and you can find the best reed petals to have the maximum performance without wasting time in useless attempts

To use this software you need diy a craft instrument, very simple:



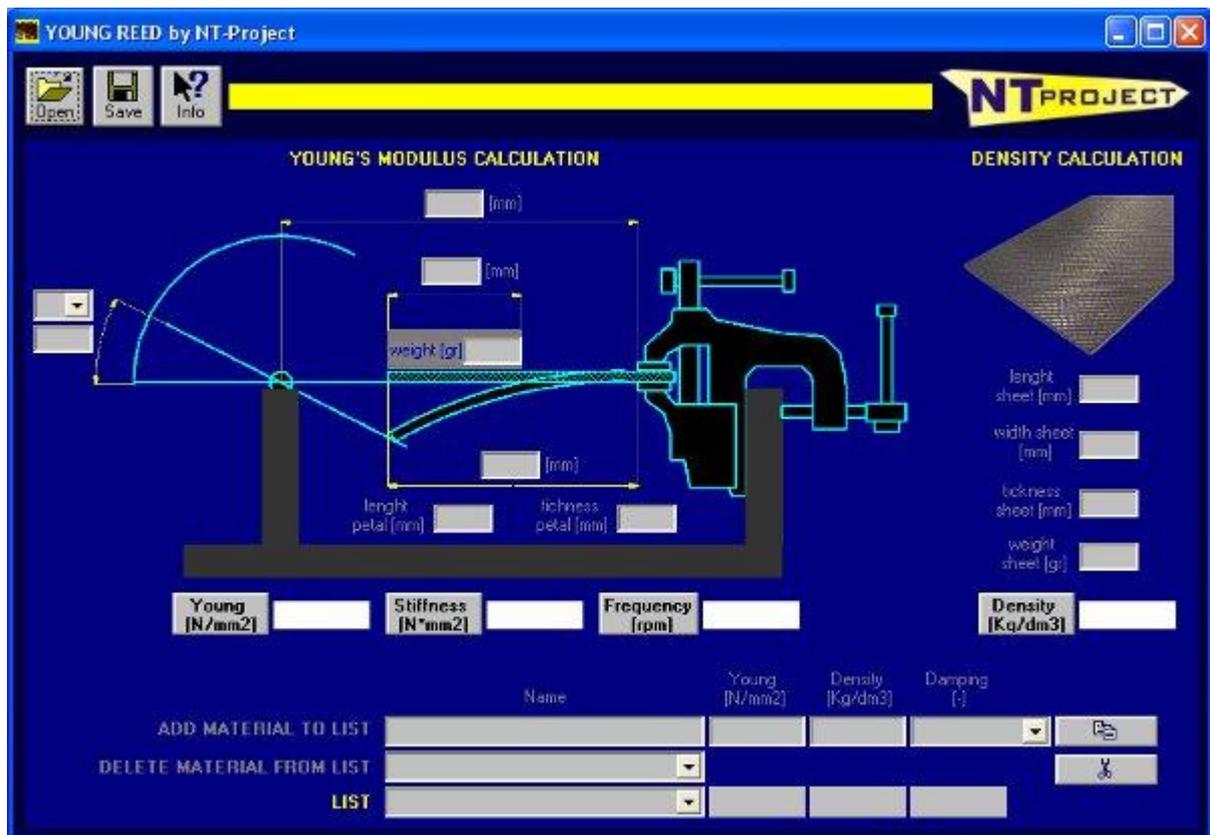
# YOUNG REED - craft instrument



In the image are shown some example of craft instrument realization that you need combine with the software YOUNG REED for the calculation of Young's Modulus and density of reed petals. The necessary components are:

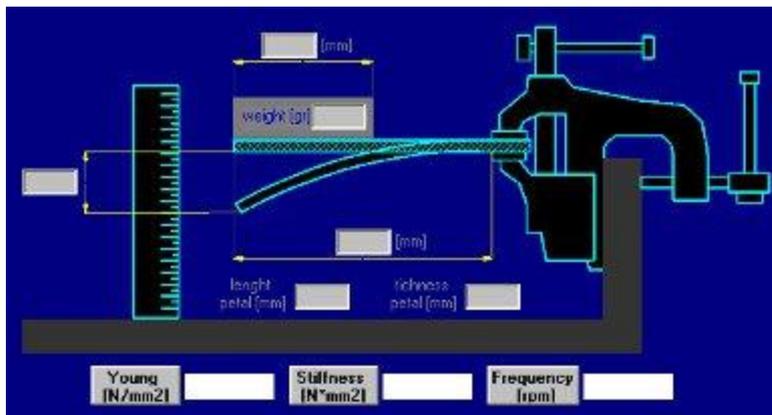
- a small vise to secure the reed petals, as if it were blocked by the latch on the reed valve;
- a weight box shaped, usually made of aluminum from 20 to 40 grams;
- a dipstick that you must put normally to the reed petal tip to verify the tip displacement after the placement of the weight on th reed petals;
- alternatively to dipstick is possible use a lancet pivote that it rests under the reed petal and a goniometer to measure the displacement after application of the weight..

# YOUNG REED - software



According to the scheme of the craft instrument that you'll use, we'll supply the adequate software YOUNG REED

# YOUNG REED - software



The data of reed petal (length, width, thickness) and that of weight (length and mass) should be placed in the software YOUNG REED together with the measurement of displacement that you read on the dipstick or on the goniometer.

With these data the software YOUNG REED calculates **Young's Modulus** of every reed petals tested.

If the reed petals are obtained from sheets, before to cut these sheets, you can weigh them and entering the sheet dimension (length, width, thickness) together the weight, the software YOUNG REED calculates the **density of the material**.

With the dimensions of reed petal and the Young's modulus calculated, the software YOUNG REED finds the **reed petal stiffness**, so you can actually see which reed petal is stiffer without being misled from thickness or advertising signs.

If in addition to Young's modulus you have calculated the density of the material, the software calculates the **rpm speed where the reed petal goes in resonance**, thereby allows you to avoid unpleasant surprises breaking.



# YOUNG REED - *software*

## **The software YOUNG REED**

vallows you to know the real technical features of the sheet material or of the reed petals that you've available, in facts the determination of Young's modulus and of density are fundamental to understanding how the reed petal will behave during operation.

The software with these values calculates the effective stiffness of reed petal and the rpm speed where it will go to resonance, so you can already do appropriate choices with this information..

Also you can use as calculated in the software REED DESIGN and SET-UP REED VALVE for the development of reed valve and kit of reed petals

With a simple craft instrument and the software YOUNG REED you can then optimize the operation of your reed valve using reliable data and then selecting the very best materials for your needs, improving engine performance.