

PRESS RELEASE

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MOLECOR IMPROVES NEW FUNCTIONALITIES IN THE TOM MECHANICAL CALCULATION PROGRAM "tomcalculation.com"

Molecor[®], worldwide leader company in the development and commercialization of **TOM**[®] **PVC Oriented (PVC-O)** pipes for pressure water, is committed to the development and continuous implementation of technical tools to support its collaborators, this innovative application has improved new functionalities in the **TOM**[®] **Mechanical Calculation Program "tomcalculation.com"**.

The user disposes a personalized platform to create his own projects and associated calculations. The tool becomes a functional, simple and interactive application to the user.

The application gives as results the different forces that **TOM**[®] **Pipes** will withstand, as well as their breaking and compression safety coefficients, based on the reference standards: **ATV-DVWK-A 127E:2000** "Static Calculation of Drains and Sewers" and **UNE 53331:1997** "Tuberías de poli(cloruro de vinilo) no plastificado y polietileno (PE) de alta y media densidad. Criterio para la comprobación de los tubos a utilizar en conducciones con y sin presión sometidos a cargas externas".

It is important to perform the mechanical calculation of buried pipelines in order to assess the mechanical stress transmitted to the pipe by the action of the different external loads so the mechanical calculations of the **TOM**[®] **Pipes** should be done before projecting the installation.

The introduction of values in the application is intuitive, obtaining a full **report** with the results of all the calculations, validating in this way the most suitable pipe for the specific conditions of each installation.

It supplements the original functionalities with a new section “**Changes for validation**”.

If the results obtained in the report do not satisfy the conditions of the selected safety coefficients, or the pipe’s maximum admissible deformation, the application offers the possibility of changing different parameters in order to obtain a valid installation.

The defined parameters are:

- **Safety coefficient used in the calculation**
It does not meet the minimum security coefficient.
- **Working pressure (bar): P_i**
The working pressure has been reduced considerably and has not reached an optimum result.
- **Height of cover above pipe crown (m): H**
The height of cover has been modified and the safety coefficients are not satisfactory.
- **Nominal pressure (bar)**
The calculation has been done with the maximum nominal pressure (PN25) and the safety coefficients are not satisfactory.
- **Bedding angle ($^\circ$): 2α**
The calculation has been done with the maximum bedding angle (180°) and the safety coefficients are not satisfactory.
- **Traffic**
 - Case where the selected installation has **concentrated traffic loads**:
The calculation has been done with the smallest traffic load (LT12) and the safety coefficients are not satisfactory. The only option that is more favourable is an installation without concentrated traffic loads.
 - Case where the selected installation has **no concentrated traffic loads**:
The installation has no concentrated traffic loads and the safety coefficients are not satisfied.

- Case where the selected installation has ***distributed traffic loads***:
The installation has been calculated with distributed traffic loads and the safety coefficients are not satisfactory.

The TOM® Mechanical Calculation Program is accessible through the web application:

www.tomcalculation.com