

The high-pressure injection systems used on diesel engines have seen the introduction of electrically controlled injectors. Due to the central position of the control coil, the high-pressure coupling is located on the side. This means that the injectors can no longer be screwed into the cylinder head and that each injector is secured by a clamp.

The design of this clamp, which takes account of isostatic factors, is an original means of studying the modeling of mechanical actions and isostatism.

Presentation:

The model of the injector clamp consists of a support representing the cylinder head, on which the various parts are positioned like in a real engine.





Teaching activities:

This tool can be used to teach the functional, structural and mechanical analyses that are part of the new AVA BTS course (French National Education). Trainees work on an educational mechanical construction made up of real parts in a real-life situation.

After completing these activities, trainees will be able to:

Identify a solution to build a complete coupling and its functional conditions:

Real components are used

Model the mechanical actions as part of a static study:

- Study of the actions that can be transmitted by a coupling.
- Study the isostatism.
- Study the association of simple/compound couplings

Calculate a tightening torque:

- Static study of loads.
- Identify a tightening torque using a torque wrench.

This model also caters for the BAC level (French National Education). A teaching kit on CD-ROM is supplied with the model.

Centers of interest covered:

Cl4: transmission, conversion and use of mechanical energy.



Dimensions:

The model is mounted on anti-skid feet.

<u>Dimensions (mm) :</u> Length= 100 Width= 100 Height= 170

weight	(Kg) :
2	

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