



# LASER CUTTING DEVICE

## Ideas on utilisation

The subject of the project is a laser cutting device, in particular for cutting layered composites. A device with a laser head can be mounted as an effector of an industrial robot. In addition, the device allows, in certain cases, to carry out an additional blow when cutting pieces of larger objects with a complex structure.

## Potential adopters of technology

The laser head is equipped with a rotating handle with a lock, integrated with a frame. At the end of the handle, a non-flammable gas nozzle is connected to the non-flammable gas hose. An object which is cut while being shifted is placed between the laser head and the non-flammable gas nozzle. The outlet of the non-flammable gas nozzle is directed directly to the cutting edge of the object being cut. The non-flammable gas rotating nozzle is mounted in a frame with a lock and it is set at an angle to the surface of the object cut. Blowing from the inside when cutting out openings in the side walls of the tank open on one side can be an example of the application. Any situation in which there is access to both sides to the part of the object to be cut out and whose cutting requires/ prefers the use of double-sided blowing, is a potential application of this solution.

## Advantages of technology

The offered solution ensures the creation of a locally non-flammable atmosphere, enabling material cutting with low gas consumption by limiting the area in which the non-flammable atmosphere is produced. Additional gas blowing from the opposite side of the object cut and connecting the laser head with non-flammable gas nozzles with the use of a frame at the same time ensures identical movement of the non-combustible gas nozzles and the laser head.

## Market and context of technology

Industries potentially interested in the solution are primarily the disposal and recycling of household appliances, in particular refrigerators and freezers.

## Preconditions in adopting enterprises

Not determined