Result name	**Multipurpose machine for laser cutting, marking and engraving of leather products**
Brief description	**Main objective** Machine for the rapid realization of (custom made) leather products for the fashion sector, simultaneously targeting different operations such as part cutting, marking and engraving on wide areas, by means of an advanced control of laser source.. **Short Description** The multipurpose laser machine is mainly targeted to the footwear domain, where several and different operations may be required on the items that compose a shoe, such as material cutting, piece marking and (custom). This is usually applied to leather materials, but also various types of textiles are involved. The developed prototype represents a flexible solution that allows to combine the main features of a galvo head (namely, the speed) with the main features of the gantry system (the wide working area) by means of a redundant architecture, properly managed by a controller based on an innovative conception. The type and the power of the laser choosen for the present implementation also allow to obtain both an accurate cutting and a good level of marking and engraving. **Innovation** Integrated solution for performing multiple operations in a shoe factory, enabling also the offer of new fashion products, incorporating engraved parts, eventually based on consumer personalization choice Shortening of production time, providing ne added value products targeting consumer personalization Laser cutting solutions already exist on the market, but they have several limitations. The main unresolved problems for the involved processes are related to some specific aspects: quality of the cut (or the engraving), speed of the cutting head, size of the working area. Current solutions are forced to accept a compromise between a good processing speed and a large working area. In fact, galvo heads are able to guarantee fast processing, but they are limited to a small working area, while on the other hand gantry systems allow to cover larger working areas, but they severely limit the speed, compared to a laser beam. The developed prototype represents a flexible solution that allows to combine the main features of a galvo head (namely, the speed) with the main features of the gantry system (the wide working area) by means of a redundant architecture, properly managed by a controller based on an innovative conception.

Picture/screenshot	
Project data	Such machine has been developed within the CoReNet project. PROJECT ACRONYM: CoReNet PROJECT FULL TITLE: Customer-oriented and eco-friendly networks for healthy fashionable goods DURATION: 36 months STARTING DATE: 1st June 2010 PROJECT NUMBER: 260169 STRATEGIC OBJECTIVE: Theme FoF.NMP.2010-2 Supply chain approaches for small series industrial production Total Budget: 5.133.189€ EU Contribution: 3.502.499€ WEBSITE: www.corenet-project.eu
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