



COOPERATION OFFER

GENERAL DESCRIPTION

Title

Spanish company specialized in femtosecond and nanosecond laser services in 5 axis: texturing, micro-milling and engraving

Summary

The Spanish company, founded in 1983, is specialized in laser texturing services (functional and design), laser micro milling and industrial engraving of moulds, tools or pieces.

In 2016 the company became a world pioneer in using a femtosecond laser machine in 5 axis to service other companies. The company also uses a nanosecond laser machine in 5 axis, milling machines and die-sinking EDM.

Description

By specializing in die, mould and engraving in high and low relief since 1982, the family-owned Spanish company has distinguished itself as a leader in high quality industrial engraving.

In 2013 the company diversified its services, opening up the range of possibilities with the laser texturing of moulds. This technology offers clear advantages regarding design, quality and repeatability in comparison to chemical etching. Since then the company continued to conduct research, innovate and create know-how in the field of laser technology. Thanks to the company's research activities and the demand of its customers, the company purchased in 2016 the first femtosecond laser machine in 5 axis, becoming a world pioneer in providing services with this technology. The company utilizes the femtosecond laser machine in 5 axis for special engraving, micro-milling and functional texturing.

Femtosecond laser is an ultra-short pulse duration laser and high precision technology. There is almost no thermal effect on the material, so it is absolutely burr-free. The result is a clean micro milling, with very sharp edges and high quality surface finishing.

This technology is ideal for the manufacturing of microcavities in mould, microfluidic channels, micro milling for tempered steel tools or hard metal tools, etc.. The company can achieve smaller details than 30 µm.

The technology can be applied on any material: tempered steel, stainless steel, hard metal, sapphire, ceramic, aluminium, plastic, glass, etc. with sizing up to 600x400mm. Thus, the company can offer endless new possibilities, not only with regard to utilizations on final parts or moulds, but also on prototypes.

Some of the market applications are: medical, perfumery, cosmetics, watch industry, electrical and electronic components and devices, aeronautics and general industry.

The company is also able to offer functional texture on final parts or moulds. The company has the know-how to change the properties of the final product, making it e.g. super-hydrophobic, super-hydrophilic, self-cleaning, antibacterial, anti-icing, self-lubricating, light diffraction properties, etc..



Advantages and Innovations

Femtosecond laser has been on the market for several years now, but there was no machine able to move the laser in 5 axis. So, the company is now able to industrialize the technology, which before was limited to laboratory or investigation research. In general, there is a big gap in terms of size between conventional industrial technologies and nanotechnology. With this machine the company positions itself in the middle of both.

The main advantages and differences compared with milling or die-sinking EDM are:

MICRO-MILLING: the technology allows controlling smaller sizes with high quality, high definition and better tolerances. Sharp edges, high-quality surface finish and absolutely burr-free milling.

FUNCTIONAL TEXTURING: absolutely new possibilities both on mould and directly on final part.

PROTOTYPES: new possibilities in terms of design and functionality, for example light diffusion over different materials like PMMA.

Current Stage of Development*

- | | |
|---|--|
| <input type="checkbox"/> Under development /laboratory tested | <input type="checkbox"/> Field tested / evaluated |
| <input type="checkbox"/> Available for demonstration | <input type="checkbox"/> Prototype available for demonstration |
| <input checked="" type="checkbox"/> Already on the market | <input type="checkbox"/> Concept stage |

Comments Regarding Stage of Development:

Intellectual Property Rights Status*:

- | | |
|--|--|
| <input type="checkbox"/> Patent(s) applied for but not yet granted | <input type="checkbox"/> Secret know-how |
| <input type="checkbox"/> Granted patents | <input type="checkbox"/> Exclusive rights |
| <input type="checkbox"/> Copyright | <input type="checkbox"/> Trade Marks |
| <input type="checkbox"/> Design rights | <input type="checkbox"/> Others (registered design, plant variety, etc.) |

Comments Regarding IPR Status: (e.g. countries for which protection has been granted or applied for)

Preferred Countries for Dissemination: all Europe

DETAILS OF YOUR OWN ORGANISATION/COMPANY

Type* Industry R&D Institution University Private Inventor

Other: please specify

Comments:

Organisation/Company Size* (please tick one box) < 10 employees 11-50 employees

51-250 employees 251-500 employees > 500 employees

Year Established: 1983

Turnover (only for business profiles): < 1 mio 1 – 10 mio

10 – 20 mio 20 – 50 mio 50 - 100 mio

Already Engaged in Trans-National Cooperation Yes No

Experience Comments: Micro-milling for moulds, micro-milling for tool on new developments, optical prototypes, functional textures

Certification Standards:

Languages Spoken: English, Spanish, Catalan



COLLABORATION DETAILS

Type of partnership considered:

Technology Offers

- Commercial Agreement with technical assistance (an agreement arranging the acquisition of a product/technology paired with the provision of a number of services in support of a transfer of technology)
- Joint Venture Agreement
- License Agreement
- Technical co-operation agreement
- Research co-operation agreement

Business Offers

- Distribution services agreement
- Acquisition agreement
- Franchise agency agreement
- Manufacturing agreement
- Outsourcing agreement
- Subcontracting
- Financial agreement
- Services Agreement

Type and Role of Partner Sought*:

- Type of partner sought (*such as industry, academy, research organisation*): Industry, Research organisation
- Specific area of activity of the partner (*example: manufacturer/distributor/user/disposal of plastic packages etc.*) manufacturer, product company
- Tasks to be performed by the partner sought: What expertise/ tasks do you expect from the partner?

Size and Type of Partner Sought (e.g. industry, research):

Additional information (pictures)

CONTACT

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