# CURRICULUM VITAE

## JOSEP GARCES


**MECHANICAL DESIGN ENGINEER & PRODUCT DEVELOPMENT**

**CONTACT**

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## PERSONAL DETAILS

Surname : Garcés Pellicer
First name : Josep Vicent
Date of birth : 6th February 1986
Place of residence : Amsterdam
Nationality : Spanish

## PROFILE & AMBITION

Mechanical Design Engineer, I am constantly interested in new and multidisciplinary technologies. During my professional experience I managed to run an electrical vehicle with solar energy, and also I built a perfectly functional 3D Printer from scratch!

Always curious about other countries and what other cultures could offer me, I decide to experience life abroad Spain since I was very young. Consequently, I developed social skills that helped me grow as a team player who brings a positive attitude and great results in his work.

-What will I offer to your organisation? Quality and efficient work. I like to work focused on my work to bring the best of it. Of course I always carry with me good vibes and positive attitude with a big smile. I consider myself an easy going guy with leadership mind trying to get the best of everything.

My ambition is to contribute with my work of innovative products while working in a multidisciplinary environment. In addition, I am looking forward to developing my hard and soft skills on both the professional and personal level.

## WORK EXPERIENCE & ADDITIONAL QUALIFICATIONS

Work experience:

| | Period | Department and position |
|---|---|---|
| MASTERVOLT THE POWER TO BE INDEPENDENT | September 2016 – March 2017 | R&D Product Development.<br><br>Design of different concept for a new battery from scratch.<br><br>The tasks required a good knowledge and understanding of design products that contain high voltages and electronics inside and enclosure specification of IP65.<br><br>Bringing new concepts and prepare reports and a presentation for final choice of the development.<br><br>I designed different concepts for the housing in the first stage of the project. One of the housings was made of aluminium, and other concepts made of PCB. |
| KROHNE | February 2014 – September 2016 | Project Leader, Mechanical Design and Stress Engineer, Product Development.<br><br>Leading project as a mechanical engineer. In charge of the development of new products. My tasks are thinking of the concept, design the product, lead and organize a team to finish drawings needed for different parts of the product. Decide what technology will be used for engineering processes, as study and choose the material for the different parts.<br><br>We used different types of plastics for this product. The housing was made of PA with a reinforcement of 30% glass fiber and a tube was made of PEEK due to their low moisture absorption and high resistance to harsh chemicals.<br><br>In this particular case, I used and snap fit so once the case is closed, it cannot be opened and the triangle features we see are profile for ultrasonic welding. This is technic that we use ultrasonic energy to melt the wanted feature. This particular device had to be tight IP68 that means that the equipment is suitable for continuous immersion in |

| | | |
|---|---|---|
| | | water under conditions which shall be specified by the manufacturer. Normally, this will mean that the equipment is hermetically sealed. However, with certain types of equipment, it can mean that water can enter but only in such a manner that it produces no harmful effects. Picture in the portofolio<br><br>KROHNE is a market-leader in electromagnetic flow meter technology. This technology can be applied in the food and beverage industry, where products are processed under hygienic conditions. But also in the chemicals industry, in the pulp and paper industry, or in the metal and mining industry where media with a high solid content are encountered |
| mampaey OFFSHORE INDUSTRIES | July 2012 - January 2014 | Mechanical Engineer in Offshore Industries<br><br>Tasks and working experience:<br>• 3D product designing and 2D construction drawings of new machines and offshore equipment.<br>• Initiation of product improvements and innovations.<br>• Considering the implications of issues such as costs, availability of materials, strength, and maintenance requirements.<br>• Strength calculations and Finite Element calculations of all Mampaey products and related products.<br><br>Mampaey Offshore Industries B.V. is a leading supplier of Mooring, Berthing and Towing Systems, with Safety and Reliability as a shared value. |
| idf INSTITUTO DE DISEÑO Y FABRICACIÓN | June 2011- June 2012 | Mechanical Design Engineer, Research and Development<br><br>My task was to develop and design a solar system for charging batteries of an electrical vehicle, project which won 2 national prizes for innovation and energy efficiency.<br><br>Due to the prizes, I did a Business Plan and research the market of Electric Vehicles for the future. |

*The position is described in more detail in the appendix*

*3D Printing:*

- **Product Design and Development** at JG Design & 3D Printing - Since June 2014.

Entrepreneur, developer and manufacturer of customized 3D products. I am in charge of the whole creative process, from developing the idea, 3D drawing, manufacturing, marketing and distribution. The products consist of parts for musical instruments realized with a 3D printer which I built myself. My products improve the sound quality of different wind blowing instruments and are successfully used by musicians around the world.

I was invited to make a presentation at Erasmus University to talk about 3D Printing and the future.

https://tmc-employeneurship.com/projects/3d-printing-investing-in-the-future

## EDUCATION & COURSES

### Education

| | Period | Education & Projects | Diploma |
|---|---|---|---|
| UNIVERSITAT POLITÈCNICA DE VALÈNCIA | 2006-2011 | BSc Mechanical Engineering<br><br>Final Project: Adapted System for charging batteries of an Electric Vehicle with solar energy. | YES |

### Courses

| | Period | Description course | Institute | Certificate |
|---|---|---|---|---|
| NAFEMS | 2014 | FEM Analysis | NAFEMS | YES |

### Sidelines:

| Organisation | Period | Department and position |
|---|---|---|
| UNIVERSITY OF OXFORD | July and August of 2007/08/09/10 | Taking care of groups of children between 12 to 16 years old in Oxford University Language School. |
| UNIVERSITATEA Transilvania BRAŞOV | September 2009 - June 2010 | **Erasmus Scholarship** in Brasov, **Romania** - Mechanical Engineering. |

## EXPERTISE

| | Average | Good | Very good | Excellent |
|---|---|---|---|---|
| *Microsoft* | | | | |
| MS Office | | | 15 years | |
| *CAD Programmes* | | | | |
| Solid Edge | | | 4 years | |
| Solid Works | | | 5 years | 5 years |
| NX Unigraphics | | | | |
| *FEM* | | | | |
| ANSYS | | 1 year | | |

## LANGUAGE SKILLS

| | Speaking | Writing |
|---|---|---|
| Dutch | Beginner | Beginner |
| English | Very good | Very good |
| Spanish | Native | Native |
| Catalan | Native | Native |

## EXTRACURRICULAR ACTIVITIES

In my free time I play music, clarinet, and saxophone. I also compose music, mixing jazz and electronics.

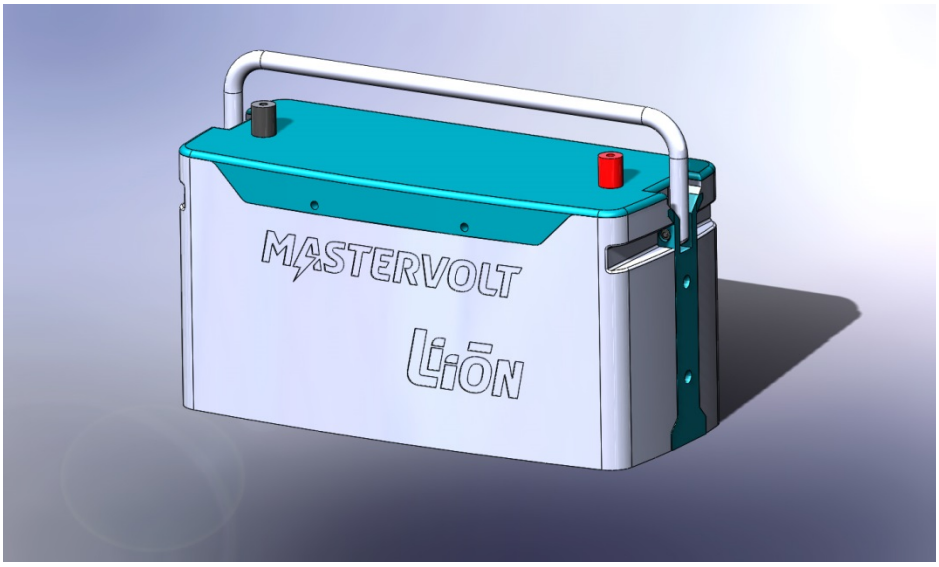
## HOBBIES

3D Printing, Music & Longboarding

## PORTFOLIO

### At Mastervolt:

Ideas in the concept face.



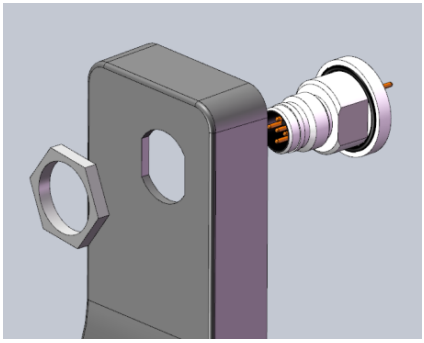

### At Krohne:

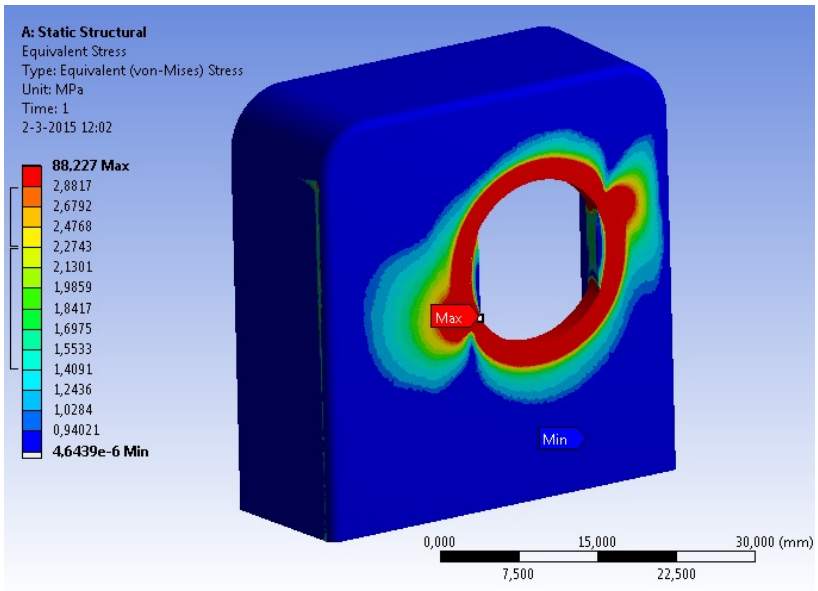
On the left, the electromagnetic flowmeter is designed exclusively for measuring the volumetric flowrate of electrically conductive, liquid process products.

On the right, ultrasonic flowmeter is designed for measuring the volumetric flowrate of non-electrically conductive liquid process products.

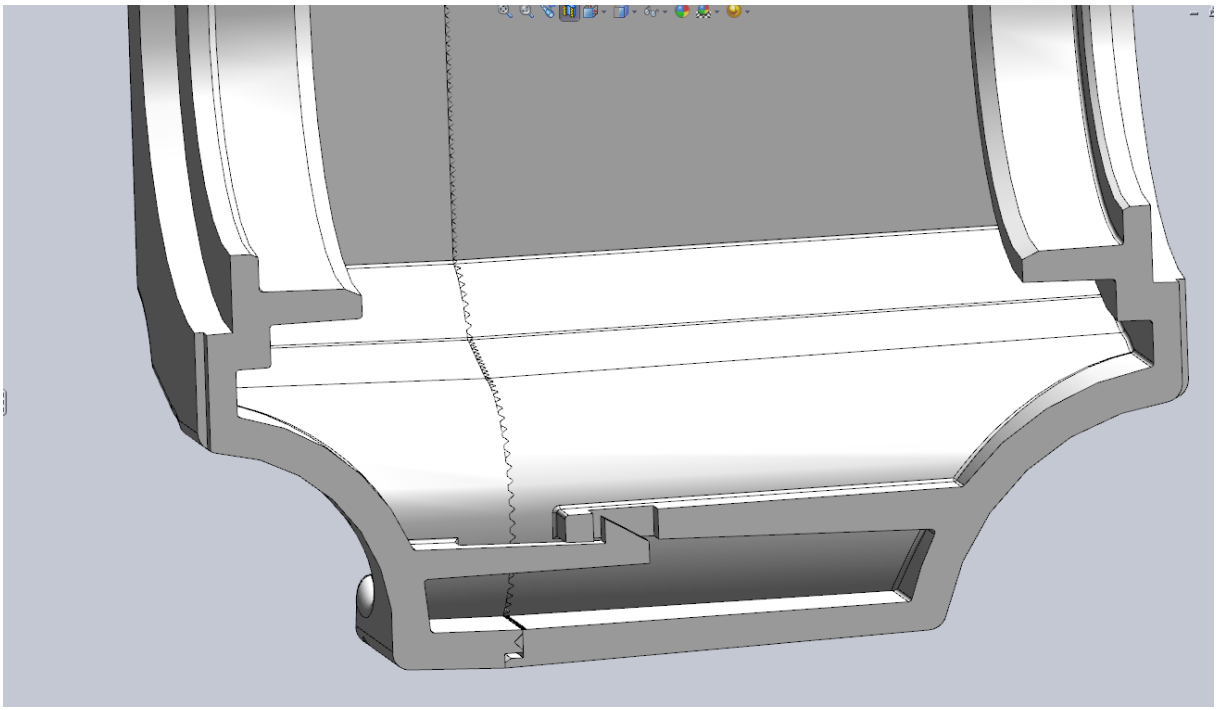

During the past years I've developed more products, but due to confidentiality agreements I cannot provide any pictures.

**Stress Calculation with ANSYS**
Design check of polyamide housing due to the stress created by tightening stain steel connector**.**

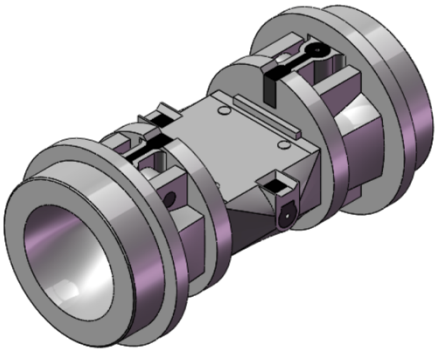




## Plastics and injection molding



I have a broad experience design in different types of plastics, as ABS, PCB, PLA, NYLON or PSU as example. In the example above is a case that I design and the assembly will be done with no need of any screw, therefore the assembly is cheaper. In this particular case, I used and snap fit so once the case is closed, it cannot be opened and the triangle features we see are profile for ultrasonic welding. This is technic that we use ultrasonic energy to melt the wanted feature. This particular device had to be tight IP68 that means that the equipment is suitable for continuous immersion in water under conditions which shall be specified by the manufacturer. Normally, this will mean that the equipment is hermetically sealed. However, with certain types of equipment, it can mean that water can enter but only in such a manner that it produces no harmful effects.



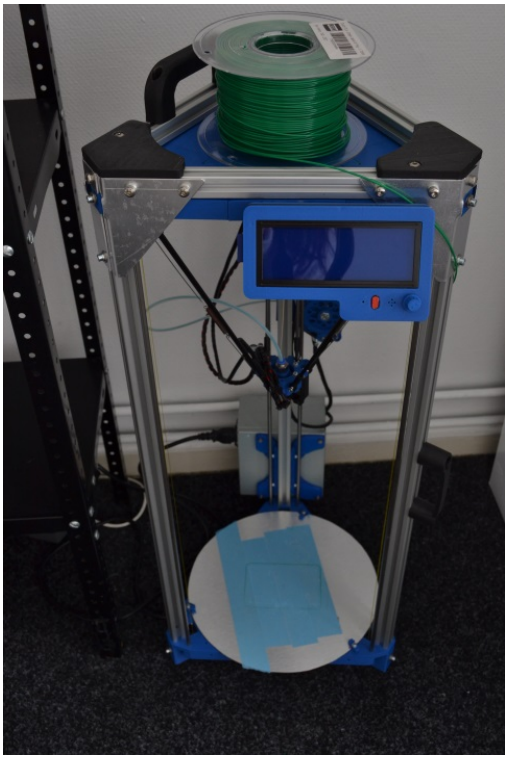
This complex tube was made of Peek due to their high resistance to harsh chemicals and the black parts are from a different material. We needed conductive material due to the physical properties needed for the project.

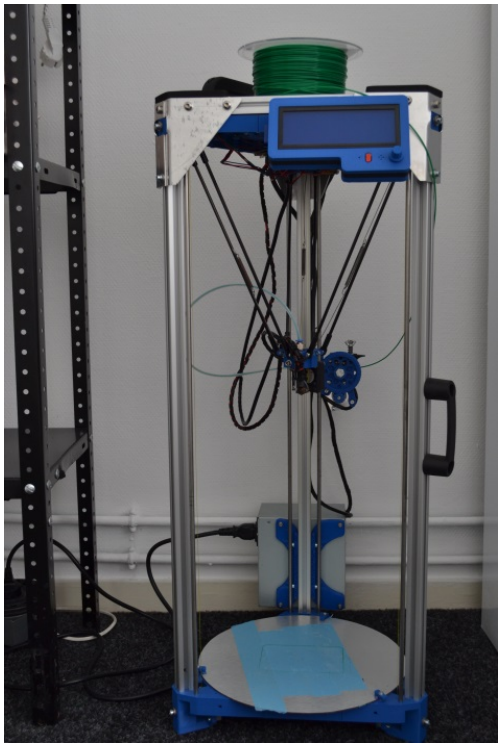
**3D Printer:**

This is a 3D printer inspired by DELTA 3DR from RepRap. I built this machine, based on the design of an existing one which the drawings were available on the RepRap community.

I improved some details from the original one, like adding aluminium plate to make it more stable, adding some handles for transportation.

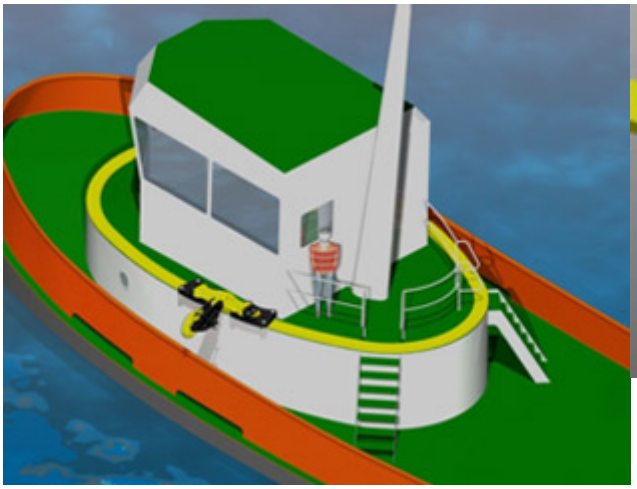
The drawings of the plastic parts were online and I redesign it and make calculations needed to make it bigger. It can print objects between the 300mm diameter in surface and up to 370mm in heigh.





**∫At Mampaey:**

Dynamic Oval Towing DOT®
The DOT system consists of a heavy oval shaped rail, mounted on the deck as an integral part of the ship's structure. On this rail the DOT carriages with a disc type towing hook are fitted and the towline force are equally distributed by means of the spreader bar, two carriages and the rollers into the rail and ship's deck structure.



Quick Release Mooring Hooks