Gimatic was founded in 1985 in Brescia, Italy by three partners whose goal was to create a dynamic organization that was attentive to market developments and the needs of its customers. Patented in 1986, the company's first product, was a pneumatic gripper for the industrial automation industry. Since then the Gimatic has filed over 180 patents and has become a leader in the handling industry.

Gimatic is well-known in its space for technical leadership. Gimatic invests 10% of its annual revenue back into research and development, which has created a steady stream of new innovation. The company is also recognized for its superior quality of its products. Thanks to advanced machinery and close-knit controls, consistency and reliability are ensured, spanning from individual components to final end-use products. Further, Gimatic takes pride in its culture of corporate social responsibility, adopting the strictest possible measures to safeguard the environment.

How 3D Printing Technology from HP Helps Gimatic Better Compete In the Fast-Paced Robotics Industry

With HP’s Multi Jet Fusion 3D Printing Capabilities, Gimatic Develops New Products More Quickly, Gains a Speed-To-Market Advantage, and Wins More Deals

Gimatic serves many types of clients globally, most of whom operate assembly lines in the automotive and durable goods industries. The company operates four separate, but connected lines of business, including:

• **Handling**: Offers many types of pneumatic precision grippers, indexing tables, linear actuators and more.

• **Plastics**: Provides interlocking components for injection molding machines, including clamping systems, grippers and more

• **Sensors**: Offers magnetic, ultrasonic, optical, and shock sensors, among others

• **Mechatronics**: electric grippers, linear motors, interfaces and related products.

Today, Gimatic has sales companies around the world and relies on a widespread, organized, stable network of distributors. The company's sales network not only markets Gimatic products, but also collects user requirements and builds specific solutions for the given need.

Often this can require products that must be modified or customized.

**INDUSTRY SECTOR**
Industrial Automation

**OBJECTIVE**
Utilize 3D printing technology to assist with the
development and manufacturing of key components, from initial design and prototyping, through production.

**APPROACH**
Discover the capabilities of HP’s 3D printing technology throughout the product development lifecycle. Determine the value of Multi Jet Fusion in developing prototypes, producing fixtures and tooling, and manufacturing components for end-use products.

**TECHNOLOGY**
HP Multi Jet Fusion, HP Jet Fusion 3D Printing Solution

**CHALLENGE**
“Our Mechatronics business is focused on creating and manufacturing intelligent products that have both mechanical and electronic components,” says Gimatic’s Quality Assurance Manager, Pietro Belleri. “This line of business is a recent expansion for Gimatic, and our current challenge is to profitably establish ourselves in this relatively new market.”

Over time, Gimatic has grown the number of products it offers and often times these devices must be updated, improved or customized. The process of improving products can be expensive and time consuming, and Gimatic has been committed to utilizing technology to reduce costs and streamline its workflows.

About a year ago, Gimatic began exploring how 3D printing might help them improve their product development process. They started with early stage prototyping, working with a service bureau that utilized stereolithography (SLS) -based machines.

**SOLUTION**
“While it was a great way to familiarize ourselves with 3D printing especially with design for additive manufacturing,” says Mr. Belleri, “it didn’t 100% fit our needs. We started looking for a different technology to have in-house. At the end of 2017 we bought an HP Multi Jet Fusion 4200.”

The more Gimatic learned about 3D printing, the more they could imagine the use cases extending beyond early stage prototypes. Given the complex nature of their products, they also wanted to utilize the design freedom offered by additive manufacturing, far deeper into the product lifecycle. Gimatic wanted the ability to produce end-use parts.

Gimatic chose HP’s technology because:

- **It helps them improve at all stages of product development** - Gimatic can now create physical representations of each product rendering - from conceptual models to functional prototypes
- **They can produce manufacturing aids** - Gimatic can now produce jigs and fixtures for their mass production manufacturing lines and before having access to 3D printing, Gimatic either had to dedicate machine time to these very short run applications, or outsource them
- **They can produce functional components** - Gimatic is utilizing the design freedom offered by additive manufacturing to produce components for their current products. Some of the new structures they incorporated include cones and blunted edges that improve the ergonomics of their products while also improving safety for machine operators. For example,
Gimatic makes carters for “collaborative robots.” These machines are designed to work side-by-side with human beings. Being able to shape the carters without hard corners and fewer exposed peaks minimize the risk of injury in cases of impact between a robot and an operator.

•**They can produce customized components for customers** - Gimatic’s customers were asking for the ability to customize their products and have them produced “on demand.” Traditionally, Gimatic would provide and end-of-arm tool for a robot and leave the client to modify end tooling to fit their own production lines. Now the company can provide client with a more complete solution that includes the electronics, as well as end-of-arm tools such as gripping fingers and other final tools. This has allowed Gimatic to expand beyond its “core business” and meet more of its customers needs.

These advantages are particularly important for Gimatic’s Mechatronics business, where volumes are less economical for mass production techniques such as injection molding.

**RESULT**

“From a personal standpoint, the capabilities of Multi Jet Fusion have been a big win for me,” says Mr. Belleri. “In my role as Quality Assurance Manager for Gimatic, I’m responsible for the quality of all of our products. Prior to bringing HP’s technology in-house, there were times we had to make sacrifices and other times when we simply couldn’t meet a customer’s request. Today, we are much better positioned for success, and this is especially important for our fledgling Mechatronics group.”

With the assistance of their new HP Jet Fusion 4200 3D Printer, Gimatic can now react to market requests much more quickly. This speed-to-market advantage has been a big benefit for the company. Now within days, they can put functional prototypes in the hands of their customers. This is helping Gimatic win more deals. The design freedom enabled by HP’s 3D printing technology is also helping Gimatic improve the performance of its products. Although the company still produces a large amount of injection molded parts, every day they’re learning more about how to leverage the geometries and shapes that additive manufacturing makes possible.

Perhaps most importantly, Gimatic has unlocked significant capacity with new product development. In the past the firm was forced to reply on CNC capabilities. Now those machines are focused on longer production runs and are being operated more productively. In the past new innovation took a backseat to the needs of production. Now Gimatic can accomplish both goals synergistically. They can continually improve while still meeting the demands of everyday business.

“Our although we've only had our HP 3D printer for a few months, I’m confident that we’ll be pushing the limits of its capabilities very soon,” says Mr. Belleri. “As we continue to deepen our knowledge of design for additive manufacturing, I trust that we will continually improve the number of products that are 3D printed. From a quality perspective, that’s very exciting.”

To learn more about HP Jet Fusion 3D Printing Solutions Visit [www.3dz.it](http://www.3dz.it).
Gimatic S.r.l.
• sito web
http://www.gimatic.com/
Intervista all’Ing. Pietro Belleri
Gimatic Quality Manager
• Qual è l’ambito in cui si muove la sua azienda?
pinze, attuatori e componenti pneumatici ed elettrici per
automazione industriale, mani di presa per stampaggio plastico
e movimentazione pick and place.
• Attuale situazione (n di dipendenti, n di sedi o
negozi, struttura, sedi italiane o estere)
Circa 240 dipendenti nel mondo, una sede produttiva in Italia
e 16 conosciute in Europa settentrionale, si tratta di una soluzione che sta prendendo
forma in Europa centrale e Polonia, Repubblica Ceca, Slovenia, Serbia, Svezia, Turchia, 2 in
Cina, Giappone, Corea.
• Stiamo aprendo delle filiali in: India, Russia, Romania
• Quanto tempo fa è nato l’interesse per la stampa 3D?
Come e per quali prodotti?
I prodotti Gimatic da sempre si prestano ad essere personalizzati
con dita di presa specifiche per l’applicazione cliente, ma fino
ad ora non abbiamo ritenuto la tecnologia della stampa 3D
efficace per garantire le necessarie caratteristiche meccaniche e di precisione. Dall’altro lato il
carattere fortemente innovativo di Gimatic impone rapidità
nella fase di progettazione e prototipazione di nuovi prodotti,
la versatilità della stampa 3D ben si sposa con questa esigenza.
Spesso riceviamo richieste di prodotti speciali da parte dei nostri
clienti, la nostra forza è la capacità di rispondere in tempi rapidi
alle loro esigenze. Nei casi in cui siano previste piccole serie, il
costo di produzione e la flessibilità della macchina di stampa
consentono di mantenere costi inferiori rispetto a processi
tradizionali di lavorazioni meccaniche o di stampa ad iniezione.
• Sfruttate un service o avete acquistato una/più
macchine/scanner? Quali?
Ci siamo appoggiati in passato a service locali nei vari stati
europei per la prototipazione 3D prima dell’acquisto della
stampante; l’obiettivo attuale è quello di fornire in un’unica
azienda è stato guidato anche dalla prospettiva di
realizzare attività in parallelo, differenziazione di prodotti da
futuro? L’eventuale motivazione? Più produttività,
attività in parallelo, differenziazione di prodotti da
realizzare
La completa libertà sulle forme realizzabili rappresenta un
valore aggiunto non solo per chi fa progettazione oggi ed inizia
cambiare il proprio modo di pensare, ma soprattutto per le
nuove generazioni, la cui forma mentis non è influenzata dai
limiti delle tecnologie tradizionali.
• Come si è sviluppata la collaborazione con 3DZ?
Oltre alla macchina che tipo di servizi vi ha fornito?
3DZ ci ha affiancato come service in una fase iniziale, è poi
diventato il fornitore della stampante fornendoci il supporto
per acquisire la necessaria preparazione per la gestione della
stampa.
• Intenzione di aumentare il parco macchine in un
futuro? L’eventuale motivazione? Più produttività,
attività in parallelo, differenziazione di prodotti da
realizzare
La scelta della posizione della prima macchina all’interno
dell’azienda è stato guidato anche dalla prospettiva di
acquisitarne una seconda per garantire tempi di consegna sempre
rapidi per i nostri clienti una volta saturata la prima macchina.
La collaborazione tra le due realtà è stata proficua per entrambi
spiega l’Ing. Cristian Parmeggiani, sales Manager della sede
bresciana che si è occupato della vendita. “Oltre a una struttura
tecnica capillare sul territorio” (3DZ conta 16 sedi tra Italia
e estero) "offriamo ai nostri clienti un supporto formativo
rivolto all’uso della macchina (il cui funzionamento è davvero
molto semplice) e soprattutto rivolto all’insegnamento di
tecniche per ottimizzare e massimizzare i risultati, per esempio
il corretto posizionamento dei pezzi e l’orientamento degli stessi
pezzi. La tecnologia della stampa 3D offre nuove possibilità di
progettazione che 3DZ aiuta a sviluppare con le team di product
development dei clienti suggerendo nuovi modi di approccio al
progetto.”