



KONICA MINOLTA

# Customer Success Story

Amiga Engineering moves into the future of additive manufacturing with Konica Minolta and 3D SYSTEMS ProX DMP 320



## Challenge

- Reinvention and innovation through technology
- Add value to existing clients
- Attract new clients



## Solution

- 2 x 3D SYSTEMS ProX DMP 320 systems with 3DXpert Professional
- Konica Minolta installation and 3D professional services



## Client benefits

- Fast, highest quality 3D metal parts
- Wide range of advanced manufacturing capability for clients across diverse industries; aerospace, dentistry, medicine, and food technology
- Installation and critical Additive Manufacturing infrastructure

**Industry:** Engineering and manufacturing

**Location:** Tullamarine, VIC

**Amiga Engineering is a high precision 3D metal printing company based in Victoria. In 1988, the company started as a pipe fitting and flanges machine shop, and now services a diverse range of customers throughout Australia. Since late 2017, Amiga Engineering has experienced significant growth, advancing along its long-term aim to innovate with technology. It excels in metal additive manufacturing (3D printing), and plans to take on greater manufacturing challenges across a range of Australian industries.**

“Konica Minolta was extremely present and helpful in all points pre, during, and post installation. It has been an active, beneficial partner who we continue to work with. Konica Minolta assisted us greatly in getting the 3D SYSTEMS ProX DMP 320 up and running as soon as possible.”

*Michael Bouchier, General Manager, Amiga Engineering*



## The challenge

Traditionally a competitive and innovative industry, Australian manufacturing is embracing additive manufacturing techniques as a way to increase competitive advantage in the face of cheaper overseas competitors. Manufacturers are reimagining the industry with the help of this emerging technology. Amiga Engineering was confident it wanted to take the next step, and move into the future.

Michael Bouchier, General Manager, Amiga Engineering, said, “Amiga Engineering’s abilities in general engineering had peaked. We struggled to find new ways to add value to our existing customers, to attract new customers, and to participate in interesting projects outside of the general engineering sector.”

As the manufacturing and design landscape rapidly changes and moves towards digitisation, engineering, machine shops, and jobbing workshops have been under increasing pressure to survive.

Michael Bouchier said, “We didn’t want to fall by the wayside like so many Australian manufacturing shops are. Without the right technology, manufacturing companies are limited in what they can create. We didn’t want to be creating more and more of the same thing, or worse, less of the same thing. We also didn’t want to rely on every piece of business we receive just to survive. We wanted to have a choice in Amiga Engineering’s direction and growth, and choose exciting new projects and partners based on desire rather than need.

“We knew manufacturing wasn’t dying. It was changing. We just needed to figure out how we could participate in, contribute to, and benefit from its evolution. We knew that 3D printing would be useful in propelling us into the future, and changing the way we worked.”



## The solution

In an effort to keep up with world best practice, Amiga Engineering was looking for a new direction, and found it in 3D metal printing.

Michael Bouchier said, “We recognised our challenges and sought to address them by viewing a range of 3D print systems from 2011 onwards, but had trouble finding a service which met all our needs until we met with Konica Minolta. The 3D SYSTEMS ProX DMP 320 stood out because it could do so much more than the other 3D print models we’d viewed.

“It let us innovate while also letting us maintain our successful 30-year history of machining pipe flanges, fittings, and other special components for oil, gas, mining, petrochemical, marine, and defence industries. With the increased capabilities offered by the 3D SYSTEMS ProX DMP 320, we could satisfy our desire to move into new and diverse industries.”

The Konica Minolta and 3D SYSTEMS 3D metal printer lets Amiga Engineering use free geometry to create items that are functional to the upper limits of design rather than being hamstrung by the technology they can be machined on. It’s a heavy-duty alternative to traditional metal manufacturing processes and offers reduced waste, faster speeds, shorter setup times, and very dense and pure metal parts with leading surface quality.

In-built atmosphere purity was another critical factor in the decision by Amiga Engineering to purchase a ProX DMP 320. Unlike most other additive manufacturing systems on the market, the ProX DMP 320 leads the way, offering the lowest oxygen contamination levels – benchmarked at 25 parts per million, but as low as 2 parts per million in recent Amiga Engineering jobs. This results in an unmatched level of density and design feature accuracy. Parts are more precise and products therefore perform better.

Further, the easy installation played an important role in the decision to partner with Konica Minolta.



## The result

Amiga Engineering is the first Australian manufacturer to expand its capabilities into the emerging market of 3D metal printing, and the only privately owned and operated 3D metal printing service bureau in Australia to date.

With enhanced 3D print technology, Amiga Engineering can add value to its customers by offering a complete service. The company doesn’t only print, it can also finish the parts to a useable state if required, and let the creative genius of design engineers flourish.

Because the 3D SYSTEMS ProX DMP 320 metal printer swaps out different material types and grades faster than any product on the market, Amiga Engineering can use the one machine for multiple materials, rather than needing to invest in multiple machines.

Michael Bouchier said, “This dramatically lessens the wait time on jobs for our clients. The 3D SYSTEMS ProX DMP 320 improves overall quality and efficiency, benefitting staff as well as customers.”

Due to its technological abilities, Amiga Engineering is enjoying newfound access to an increased scope of industries and projects.

Michael Bouchier said, “Konica Minolta was extremely present and helpful in all points pre, during, and post installation. It has been an active, beneficial partner who we continue to work with. Konica Minolta assisted us greatly in getting the 3D SYSTEMS ProX DMP 320 up and running as soon as possible.”

After the successful installation of the first 3D SYSTEMS ProX DMP 320, Amiga Engineering now has a second machine in place. Amiga Engineering is currently working with titanium, stainless steel, aluminum, cobalt chrome, and Inconel 718 (high-strength, corrosion-resistant nickel chromium), and is looking at future materials around high-tensile carbon steels for mould design and duplex stainless steel for special instrumentation and wearing corrosive parts.