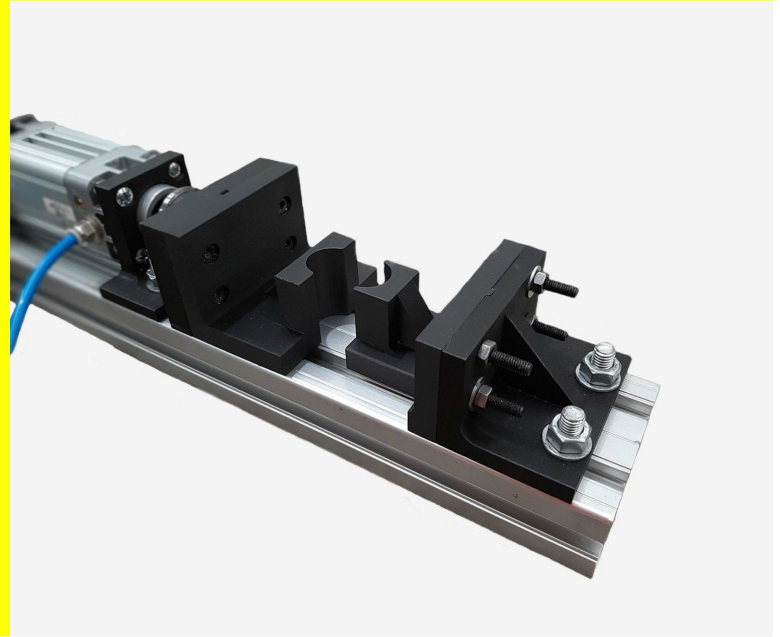




PART NAME	<b>Pneumatic Clamping System</b>
CUSTOMER	<b>Additive and Robotic Manufacturing (AaRM)</b>
LOCATION	<b>Victoria, Australia</b>
MATERIAL	<b>Onyx, Continuous Carbon Fiber</b>
APPLICATION	<b>Tooling and Fixtures</b>
INDUSTRY	<b>Manufacturing</b>



## 3D Printed Pneumatic Clamping System

### Additive and Robotic Manufacturing

Additive and Robotic Manufacturing — or AaRM — started out distributing aluminum to customers in Victoria, Australia. The business rapidly scaled, and their customers frequently requested short lead times, leaving little to no time to fabricate custom tooling. The AaRM team started experimenting with 3D printing jigs and fixtures in PLA material, but they needed something that could produce strong, reliable tools ready to withstand repeated use and interaction with cutting fluids and oils. A Markforged 3D printer fit the bill.

AaRM designed a custom pneumatic portable clamping system that was completely 3D printed, except for the aluminum extrusion base and the pneumatic air cylinder. It was easy to set up on the drill presses, milling machines, automatic tapping machines, and copy routers as needed. In the event of machine or operator mishap, it's easy to print a replacement part. A system that would once have taken weeks to build can now be printed in days and repaired overnight, with minimal labor time spent fabricating custom tooling on the production floor.

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**Markforged Partner:**SF Design

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