

360 CAMERA FRAME

END USE PART — Radiant Images prints the entire frame of the AXA 360 camera rig with Markforged.

PRECISE FITTINGS — The frame consists of high strength polygonal brackets bolted together at an angle.

REPLACING METAL — The printed composite parts replace aluminum and are lighter and faster to produce.

MASSIVE SAVINGS — Radiant Images prints frames **3x cheaper** and **4x faster** with Markforged technology.

The 3D Printed Parts



INTEGRATED CAMERAS

Radiant Images mounts 12 cameras onto each AXA 360 rig. Each camera is held in place with a Markforged printed bracket.

COMPLEX INTERFACING

More than 30 Markforged printed parts comprise each AXA 360 frame. Each frame piece is bolted to at least five other printed parts.

Multibody Construction

The AXA 360 camera system allows film creators to record seamless, high-quality, 360 degree video. Before using Markforged, Radiant Images outsourced machined 7075 Aluminum frames — a process that was both slow and yielded a heavy rig. By printing the frame in-house out of Onyx and Carbon Fiber on their Markforged Industrial Series printer, Radiant Images builds lighter rigs faster than they could before.

	CNC MACHINED	MARKFORGED	SAVINGS
Fabrication Time (per bracket)	48 hrs	11 hrs	77%
Part Weight	137g	51g	63%

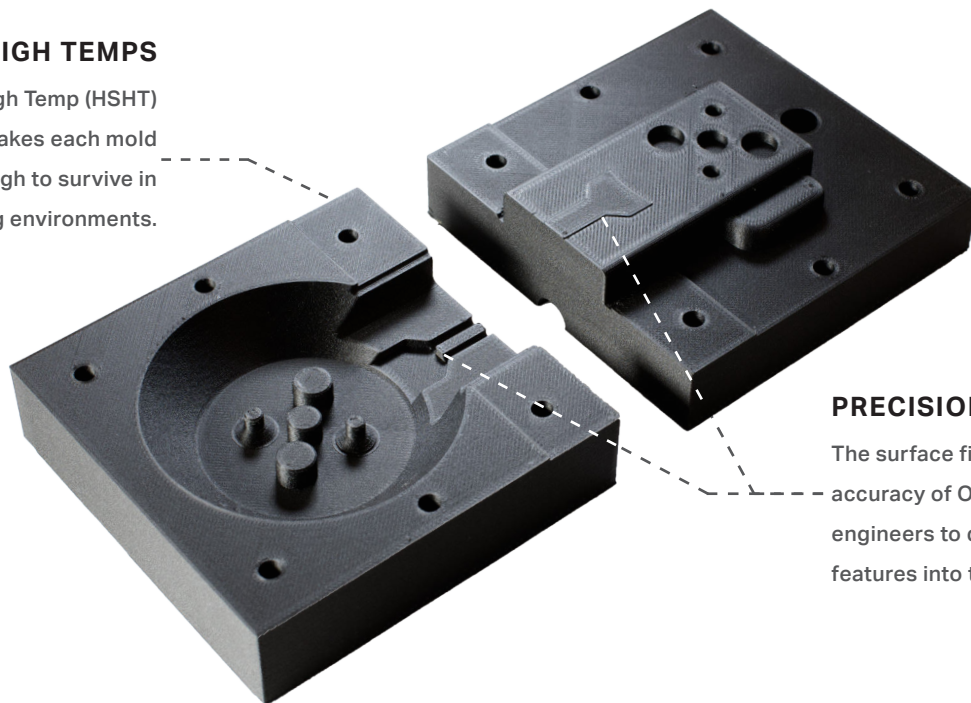
THERMOSET MOLD

- STRENGTH AND PRECISION**— Humanetics uses a Markforged X7 to print molds for thermoset plastics.
- EXTREME ENVIRONMENT** — Each mold must withstand significant clamping force while heated to 220° F.
- FAST LEAD TIMES** — Onyx and HSHT printed molds replaced an inefficient, out-of-house silicone process.
- MASSIVE SAVINGS** — Humanetics prints molds **4x cheaper** and **2.5x faster** with Markforged technology.

The 3D Printed Part

ROBUST IN HIGH TEMPS

High Strength, High Temp (HSHT) fiberglass makes each mold piece robust enough to survive in thermoset molding environments.



PRECISION PRINTING

The surface finish and dimensional accuracy of Onyx allow Humanetics engineers to design precision features into their molds.

Next Day Molds

Molded thermoset plastics are widely used to take advantage of their strength and heat deflection temperatures. The quick turnaround time, low production cost, and long lifetime of Markforged printed molds make them an excellent fit for replacing traditional thermoset molding methods. Printed thermoset molds can withstand temperatures up to 302°F (150°C) for extended periods of time with minimal distortion.

	SILICONE MACHINED	MARKFORGED	SAVINGS
Fabrication Time	144 hrs	60 hrs	58%
Fabrication Cost	\$1,000	\$240	76%