

SEAWATER INTAKE

SEAFARING PARTS — MARTAC uses Markforged to print water intakes for autonomous aquatic vehicles.

VITAL COOLING — Each intake pulls seawater from outside the vehicle and uses it to cool the motors.

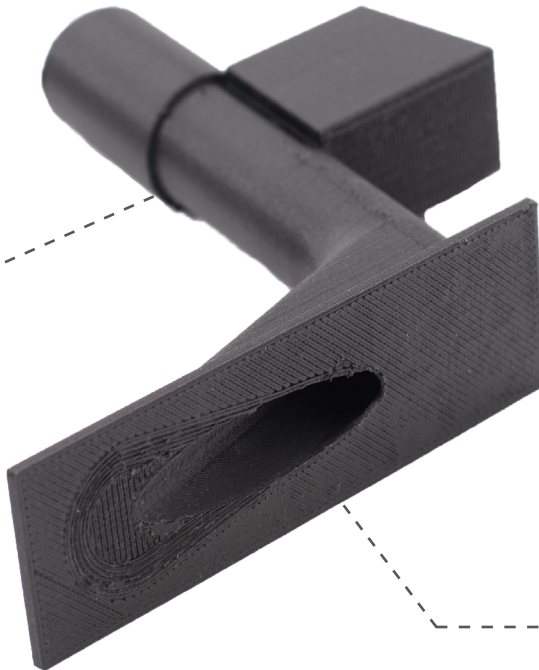
UNIQUE SHAPE — By using Onyx, MARTAC can design a geometrically complex, highly functional part.

MASSIVE SAVINGS — MARTAC prints intakes **30x cheaper** and **18x faster** with Markforged technology.

The 3D Printed Part

SPECIALIZED GEOMETRY

By 3D printing this part, MARTAC can create a complex, custom geometry that doesn't need to conform to subtractive machining constraints.



OCEAN READY

Onyx's nylon base material allows the intake to survive the corrosive seawater while also being robust enough to sustain debris impacts.

Ocean Grade Parts

MARTAC designs and manufactures high performance unmanned aquatic vessels. In order to cool the large motors on these vessels, they use complex intakes to route seawater through cooling channels. By printing these intakes, they drastically cut fabrication costs on what would be an incredibly difficult part to fabricate otherwise. Onyx is robust enough to survive both debris and corrosive seawater.

	MACHINED	MARKFORGED	SAVINGS
Fabrication Time	144 hrs	8 hrs	94%
Fabrication Cost	\$300	\$8	97%