

STANCHION ADAPTER

MANUFACTURING TOOLING — Eaton fabricates assembly line tooling to press tubes into hard plastic clips.

HIGHLY DURABLE — The stanchion adapter must securely constrain clips through repeated cyclic loading.

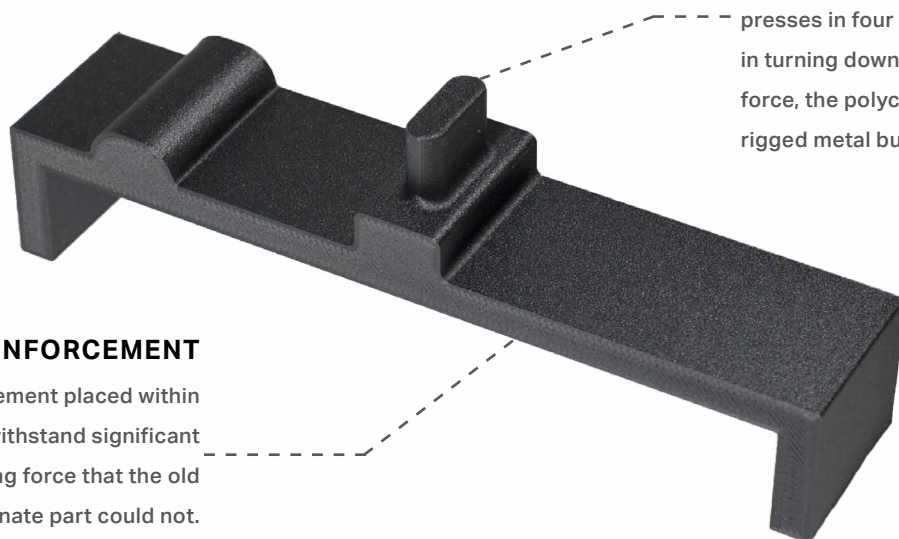
SUPERIOR MATERIAL — The Markforged part is stronger and faster to make than a polycarbonate version.

MASSIVE SAVINGS — Eaton now prints adapters **4x cheaper** and **41x faster** with Markforged technology.

The 3D Printed Part

STRONG LOCATING FEATURE

The bump at the center of the part anchors a tube clip while an operator presses in four tubes. Due to its role in turning downward force into lateral force, the polycarbonate and jury-rigged metal bumps often sheared off.



FIBER REINFORCEMENT

Fiberglass reinforcement placed within the part allows it to withstand significant cyclic bending force that the old polycarbonate part could not.

Assembly Line Tooling

Before using Markforged, Eaton tried several fabrication methods for their adapter. None yielded a part robust enough to survive on the factory floor. Their jury-rigged, welded adapter fell apart and their machined polycarbonate adapter broke with cyclic loading. Using a Markforged 3D printer, Eaton quickly printed a composite stanchion adapter. Comprised of chopped carbon fiber nylon material reinforced with Fiberglass, the part outperformed their previous iterations for far less cost than machined aluminum.

	CNC MACHINED	MARKFORGED	SAVINGS
Fabrication Time	3 weeks	12 hours	97%
Fabrication Cost	\$115	\$28	76%