

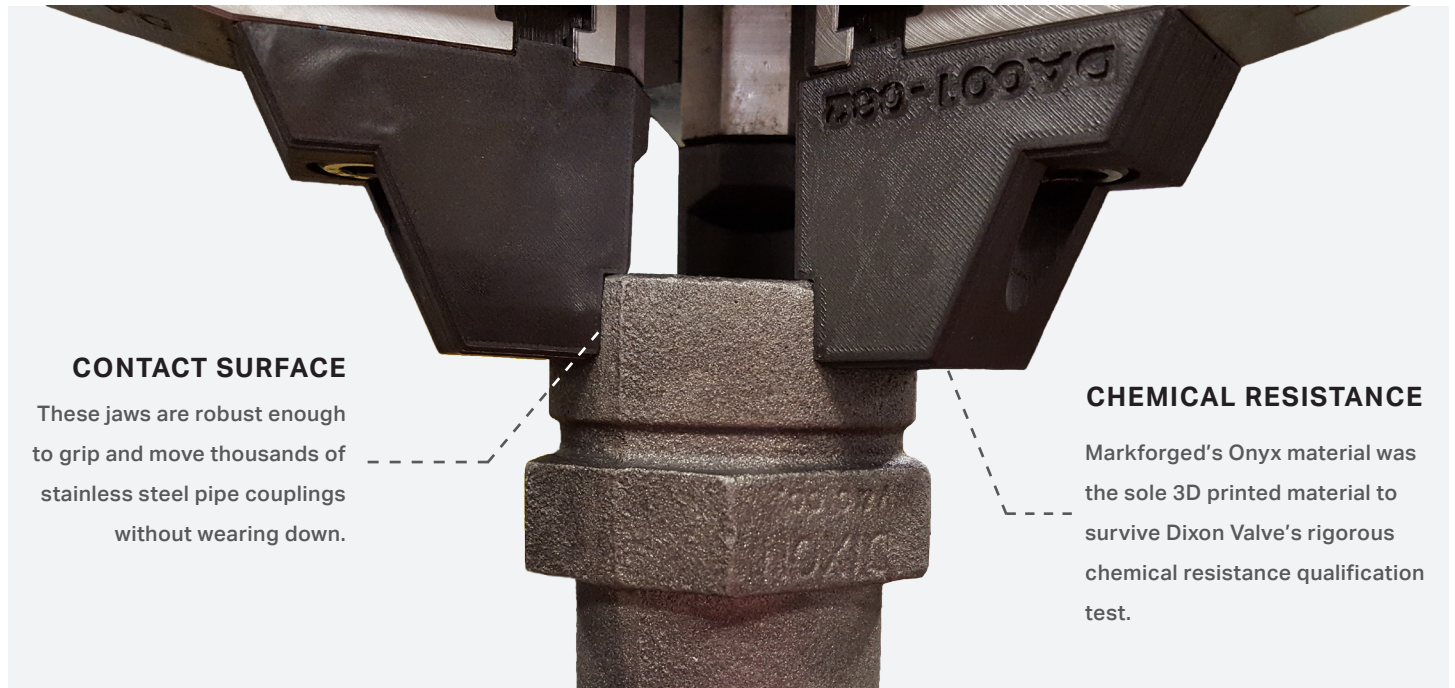
COMPOSITE JAWS

END OF ARM TOOLING — These jaws mount on a robot that transfers fittings between machining centers.

CHEMICALLY RESISTANT — Jaws must survive corrosive fluids while subjected to repeated clamping.

NEXT DAY TOOLS — With a Markforged Mark Two, Dixon Valve is able to retool a robotic arm in 24 hours.

MASSIVE SAVINGS — Dixon Valve achieved **30x cost savings** and **14x time savings** by printing these jaws.



CONTACT SURFACE

These jaws are robust enough to grip and move thousands of stainless steel pipe couplings without wearing down.

CHEMICAL RESISTANCE

Markforged's Onyx material was the sole 3D printed material to survive Dixon Valve's rigorous chemical resistance qualification test.

A New Paradigm

Markforged enabled Dixon Valve to produce new manufacturing tooling solutions faster and cheaper than ever before. System Engineer J.R. Everett describes the Markforged machines as "a critical component in our design process [that's] really changing the way we work to the point where we are actually altering our procedures and plans to accommodate it." With their Markforged machines, Dixon Valve engineers eliminated the need to outsource or machine in house the vast majority of their grippers.

| | MACHINED | MARKFORGED | SAVINGS |
|------------------|----------|------------|---------|
| Fabrication Time | 144 hrs | 9 hrs | 93% |
| Fabrication Cost | \$290 | \$9 | 97% |

