

QTRCO Reduces New Product Demonstration Cost by 78%

“Dimension prototypes have helped us rapidly increase our revenues by making it practical to expose our product to a much larger number of prospects.”

— Ed Holtgraver, QTRCO

QTRCO designs and builds actuators that open and close valves that are too heavy or inaccessible to be operated by hand in the chemical, oil and gas, nuclear power and other industries. In the past 13 years, QTRCO has twice developed unique designs that have revolutionized the valve actuator business and in the process sold over 25,000 actuators.

QTRCO’s latest product, its F-Series Flat Yoke™ Actuator, is a direct replacement for traditional Scotch yoke actuators. The key advantage of Flat Yoke Actuators is that they have two cylinders to balance the forces on the yoke that turns the valve. This eliminates the side-loading forces that generate friction on conventional Scotch yoke actuators so the F-Series actuators last much longer and have a much lower risk of failure.

The challenge for QTRCO is presenting its unique design to process industry engineers who have worked with Scotch yoke actuators for many years. “We have found that it’s critical to show potential customers a working version of our actuators with a cutaway so they can see its unique advantages for themselves,” said Ed Holtgraver, Chief Executive Officer of QTRCO. “We built a 250-pound metal cutaway version of an actual F-Series actuator and installed it in a 26-foot display trailer. We used to drive this trailer around the southwest and sometimes further to show potential customers how our actuators work. The people who viewed our demonstrations often became customers but the problem was that we could only reach a limited number of them by driving.”

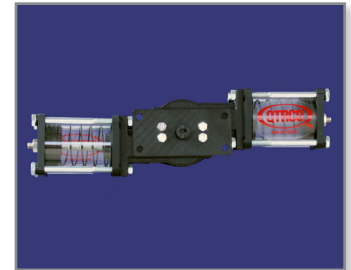
The company’s sales team spent too much time driving the demonstrator to customers’ facilities. Sometimes Holtgraver himself was tied up for up to a week driving the truck. The truck only gets 7 miles per gallon and uses \$3 per gallon diesel fuel, so visiting a customer 500 miles away cost \$428 in fuel alone.

“QTRCO was interested in presenting their product to a much larger number of prospects by making models of their actuators in ABS plastic,” said Dianna de la Rosa, Account Manager for Texas Engineering Systems, a Stratasys integrator. “They chose to go with Dimension BST 3D printers because

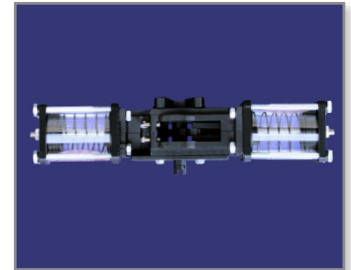
Dimension 3D Models Vs. Metal Samples:

Cost of 10 Sales Calls Over 1000 Miles in 1 Week

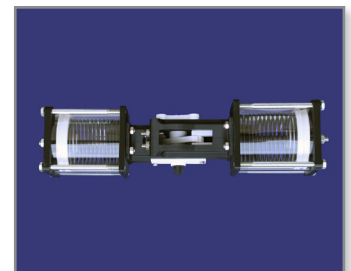
	Metal Sample	Dimension Sample	Savings
Production Cost	\$2,000	\$225 to \$80	96 to 88% (\$1775 to \$1920)
Weight	250 lbs	5 to 1 lbs	98 to 99% (245 to 249 lbs)
Time (Driving)	96 hours	8 hours	92% (88 hours)
Sales Rep Time Cost	\$8,000	\$2,000	75% (\$6,000)
Fuel Cost	\$428	\$38	91% (\$390)
TOTAL SAVINGS	\$10.43	\$2.26	78% (\$8.17)



Top view of small version of Dimension printed sample that weighs only one pound.



Side view of small version of Dimension printed sample that weighs only one pound.

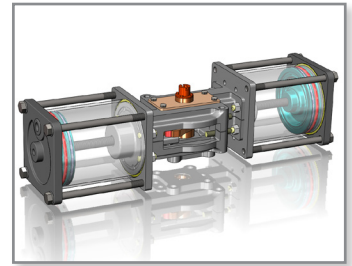


Side view of larger version of Dimension printed sample that weighs five pounds.

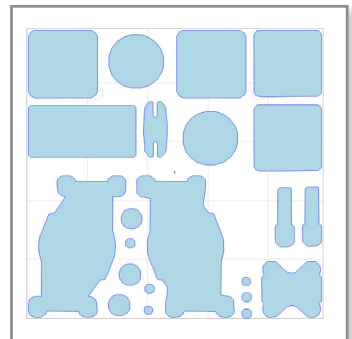
their parts are large enough that they can easily remove the support material manually. They simply export an STL file from SolidWorks and import it into the Catalyst program that runs the 3D printer."

QTRCO did a cost justification study that concluded that Dimension BST 3D printers would pay for themselves quickly by enabling the company to sell more by showing its products to a much larger number of potential customers. The company runs the 3D printer nearly continuously to make functional models of its F-Series actuators in two different sizes. The larger size costs about \$225 to make and the smaller size, about \$80. The models work just like the real actuators. They are light enough to be carried, and being nonmetallic, can easily be cleared through airline security. QTRCO has made about 50 of each size model and distributed them to its representatives around the country.

"When a prospect expresses interest, we send the local representative to show them how the F-Series actuator works," Holtgraver said. "Or we get on an airplane and go see the customer. The productivity of our management and sales team has been increased because we no longer have to spend days driving the metal prototypes to the customers' facilities. The plastic model is much more convenient for our customers because we can show it to them in their office rather than them having to come out to our trailer. We leave the plastic models with distributors so they can more effectively show many more end users. The prototypes have helped us rapidly increase our revenues by making it practical to expose our product to a much larger number of prospects."



CAD model of previous sample which weighed 250 pounds.



Dimension printer plate with all parts for the FDM printed sample.

For more information about Dimension 3D Printers, call **888.480.3548** or visit www.dimensionprinting.com

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