

Midwest Pressure Systems

www.midwestpressuresystems.com



Objective: Setup Reduction Scrap Reduction
 Increase Throughput

Background

Midwest Pressure Systems (MPS) was incorporated in 1987 by Robert (Bob) Vogt, President, near Chicago, Illinois. Within their modern facility MPS manufactures air driven systems for boosting the pressure of shop air and other gases; as well as custom designed boosters and booster systems for complex operations. Each system is compact, easy to install and less expensive than motor-driven compressors.

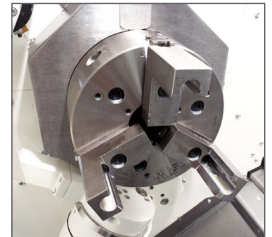
Scope

Midwest Pressure Systems (MPS) experienced production limitations for their family of complex parts due to a combination of older machining centers and lathes (single spindle, horizontal and vertical), which severely limited the flexibility of machining products in one smooth operation. Most parts progressed through manufacturing with 2-6 operations, plus handling and setups, equaling hours of downtime and creating higher risks for defective parts. Bob's overall goal was to augment their capabilities with a comprehensive solution to compress machining operations.

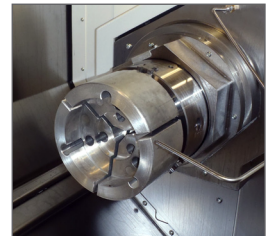
Looking for new innovations, MPS turned to John Coudal, Senior Sales Associate for Machinery Systems, Inc., (a Mazak distributor) to research and suggest machines that would meet operational needs. John advised MPS to invest in a Mazak Integrex200 to achieve "Done-in-One performance" instituting one setup and no fuss automated tool changes to receive optimum operational savings. In correlation with this system, John suggested to install the Integrex200 with an eight inch quick change chuck (QJR08) from Kitagawa-NorthTech, Inc. This solution would further eliminate hundreds of hours of production slowing processes. Kitagawa quick change chucks were also selected for their simplicity of installation, (as they mount up immediately) instant customer service and the ability to use existing soft jaws to eliminate extended costs.

After a year of experiencing downtime reductions, MPS and Machinery Systems teamed up once again to implement further improvements to reach the next level in optimization. The next generation was awarded to the Mazak Integrex200S. This production beast adds a second spindle, both outfitted with Kitagawa QJR08 chucks, generating additional throughput and efficiencies to MPS's activities.

Freedom from 2-6 operations, 60 min set ups and excessive handling has recharged innovative opportunities as MPS looks forward to developing new designs to enhance their family of products.



Integrex200S, left spindle, Kitagawa QJR08 with custom top tooling



Integrex200S, right spindle, Kitagawa QJR08 with custom top tooling



Finished booster system parts, MPS

Example of QJR Returns

	Standard Chuck	Quick Change Chuck
Time Changing Jaws	10 Minutes	2 Minutes
Time Reboring Jaws	20 Minutes	0 Minutes
Jaw Changes/Day	4	4
Working Days/Year	260	260
Machine Cost/Hour	\$75	\$75
Total Cost /Year	\$39,000	\$2600
Extra Profit		\$36,400

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