

THE LEADING MANUFACTURER OF
WAX-ROOM EQUIPMENT
WORLDWIDE

MPI
Automation



www.mpi-systems.com

THE WORLDWIDE LEADER AND INNOVATOR

MPI is the worldwide leader in wax-room equipment and the acknowledged leader in wax-room innovations. MPI has developed and introduced more systems and products than all of our competition combined. It's no surprise that MPI is now revolutionizing the technology of producing and processing wax patterns through automation.

AUTOMATION - PROFIT THROUGH INNOVATION

In today's market, everyone is trying to do more with less and that's exactly what automation allows you to do. The wax room of the future will incorporate automation because the benefits are undeniable. Fifty percent of all pattern defects are the result of operator error. With automation – 100% of operator inconsistencies are eliminated, as is the cost of skilled labor. Current MPI automation partners are experiencing:

- Perfect assemblies 100% of the time
- Reduced scrap by an average of 50%
- Reduced cycle times by 50%
- Increased yields by 20% or more
- Increased throughput by an average of 50%
- Increased productivity and profitability

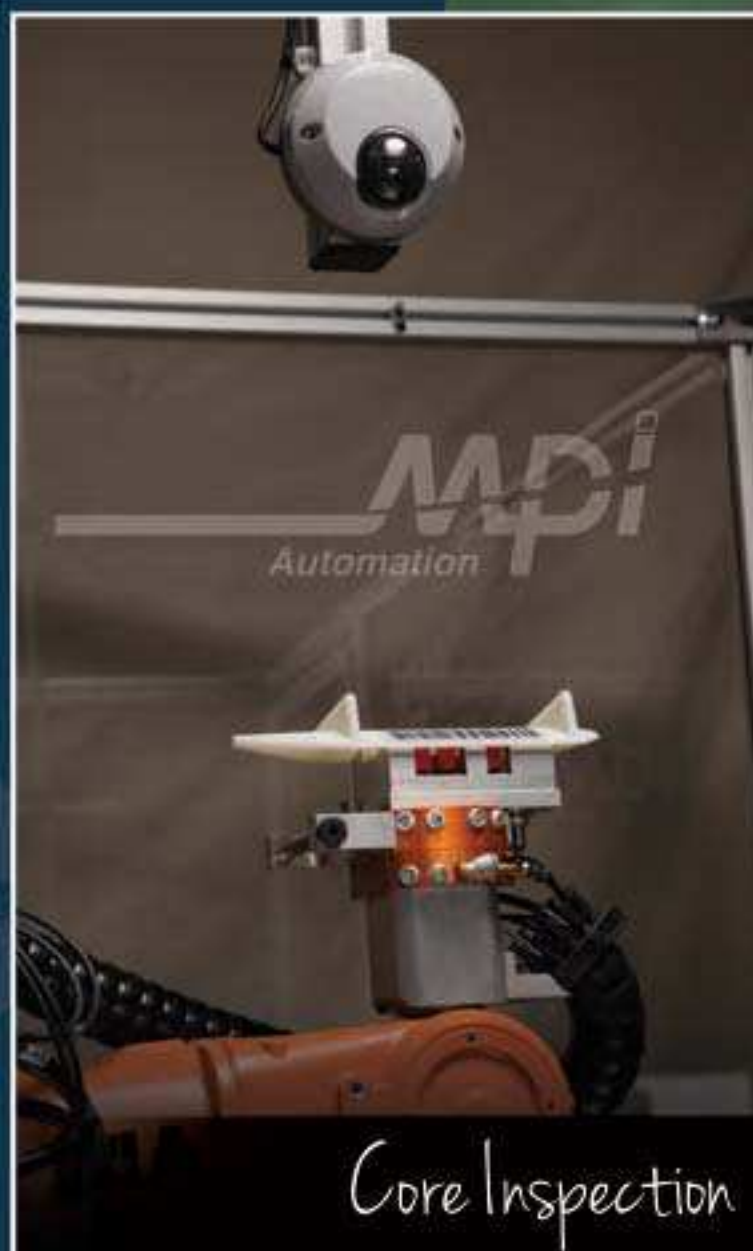
AUTOMATED INJECTION

The 55 series C-frame vertical injectors can be automated with a six axis robot – providing a world of opportunities. The Wax Injection Cell Robot is an extension of the wax injector and handles all of the operations normally performed by a wax injector operator. All pattern operations prior to assembly are automated for maximum efficiency. Operations that can be automated include:

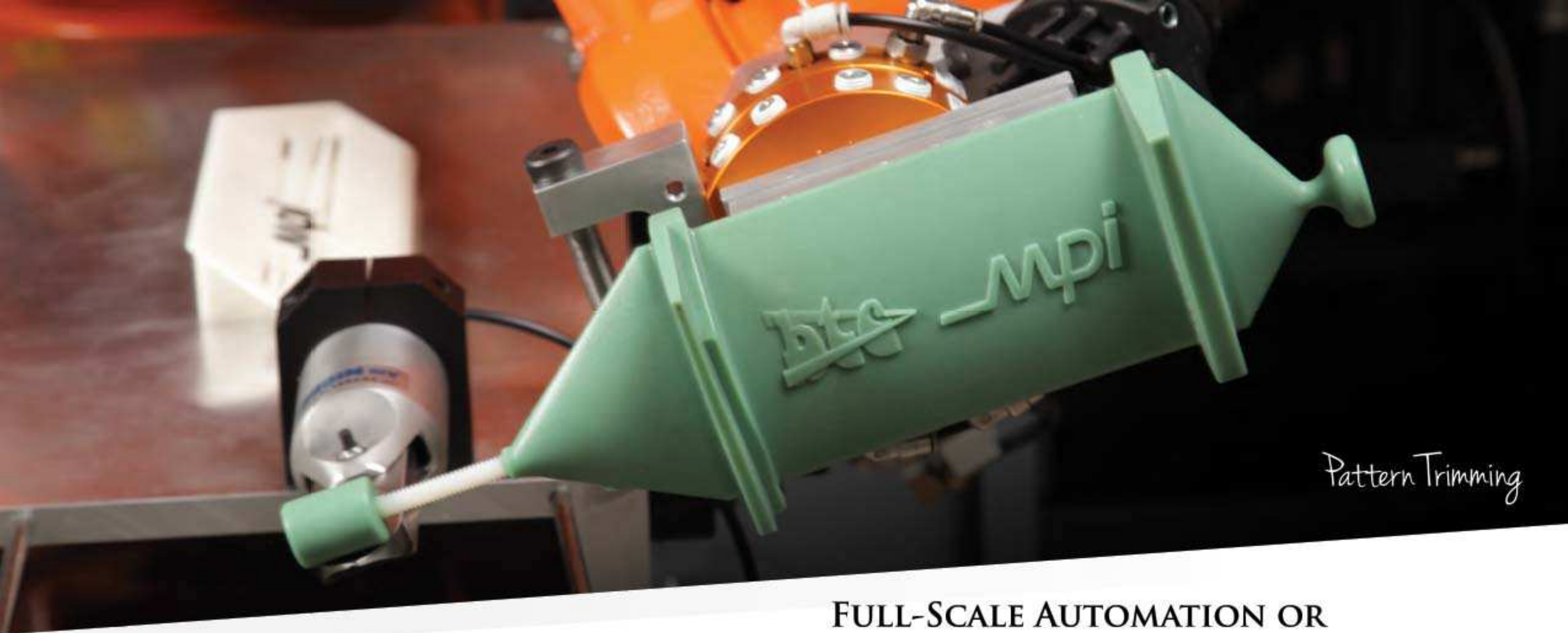
- Wax die injection
- Pattern removal
- Die cleaning and lubrication
- Core loading and inspection
- Tool change
- Pattern setting
- Pattern in-gate removal
- Pattern trimming
- Secondary operations

ADDITIONAL BENEFITS:

- Twice as many patterns as with manual operation
- Reduced pattern defects
- Reduced distortion
- Uniform pattern trimming
- Round-the-clock operation



Pattern Pick-up



Pattern Trimming

AUTOMATED PATTERN ASSEMBLY

MPI is continually integrating higher levels of automation into their patented pattern assembly systems. MPI's automated pattern assembly system features MPI's patented welding process. Systems can be built to support standard wax assemblies or we can create a robotic cell that is unique to your specific application.

Automation has proven time and again that a robotics-based machine can outperform manually created assemblies in accuracy, repeatability and efficiency. Variations are completely eliminated – improving throughput and increasing casting yields. With automation, the number of wax patterns placed on a runner can be substantially increased because robotics allows for highly accurate and repeatable placement.

ADDITIONAL BENEFITS

- High quality welds 100% of the time
- Cycle times 2-5x faster
- Inclusions are eliminated
- Pattern drop off is eliminated
- Fragile assemblies are no problem
- Eliminates skilled labor
- Round-the-clock productivity
- Relentless quality and consistency

FULL-SCALE AUTOMATION OR AUTOMATE A SINGLE PROCESS

Many organizations have not investigated automation thoroughly because they think of automation in its full scale, instead of looking at how automating a single process can produce tremendous results. By providing single automation solutions, MPI can work with you to evaluate each operation and create an automation plan that will work for you today and prepare you for the benefits of expanded automation in the future. MPI can create an affordable solution tailored to your specific needs that will provide you with the biggest bang for your buck and fastest ROI.



Process Control

CELL CENTRAL CONTROL

All MPI machines are equipped with Smart Controls, our state-of-the-art process control technology that utilizes user-friendly, Windows-based, software with an intuitive touch-screen display. This technology eliminates the possibility of making an out-of-tolerance wax pattern. No one else even comes close.

- Simple to operate
- Menu Driven
- Operator not required to be a robot programmer
- Process control = consistency



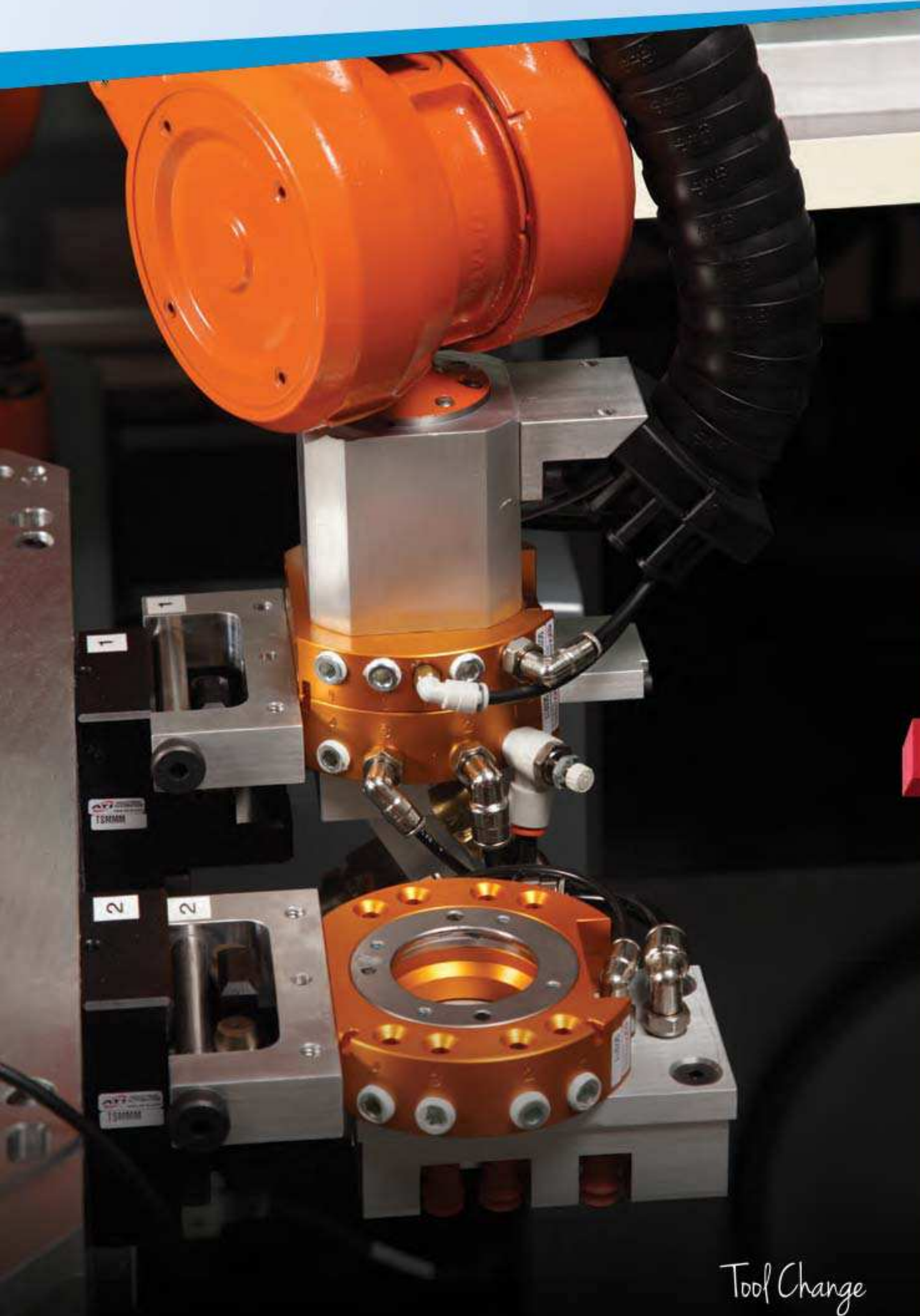
50% Reduction in Cycle Time, Scrap and Rework

Need proof?

Inject your wax into your dies at MPI and decide for yourself!

FOUNDRY OPERATIONS

Automation can have a dramatic effect on foundry productivity and profitability. The entire process begins in the wax room. Any problems that occur in the wax room will be felt at every stage of the process. Automation means that variations are not only removed from the wax process – it is eliminated from your downstream operations as well. Nothing is more important than ensuring that you start the process with a perfect product.



Tool Change

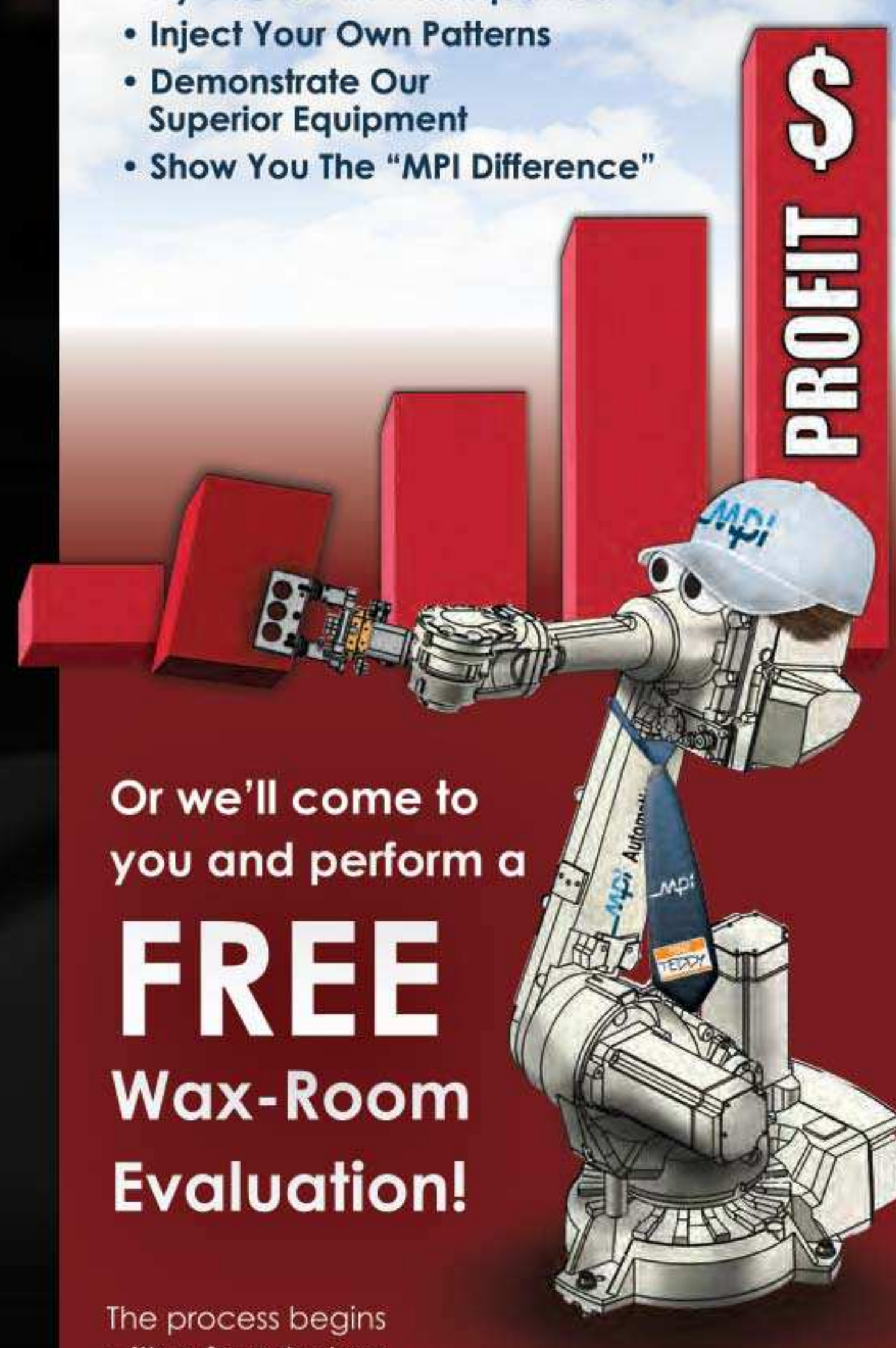
MPI Incorporated • 165 Smith Street, Poughkeepsie, NY 12601
Tel: (845) 471-7630 • Fax: (845) 471-2485
sales@mpi-systems.com • www.mpi-systems.com
Proudly made in the USA

U.S. and International Patents © Copyright 2013 MPI Inc.
All rights reserved. DS Automation-4P-13-3-20

fly & try Program

We're so confident we'll improve your wax-room performance and profitability, we'll...

- Fly You to MPI Headquarters
- Inject Your Own Patterns
- Demonstrate Our Superior Equipment
- Show You The "MPI Difference"



Or we'll come to you and perform a

FREE
Wax-Room
Evaluation!

The process begins with a foundry tour so that MPI engineers can perform an exhaustive review of your current process and help you to understand what type of return on investment (ROI) you may experience as a result of increased performance and cost savings. A formal proposal with our recommendations will then be presented which can be fine-tuned based on further discussion.