

Technology that improves your economy

SPECIAL REPORT



The Economic Impact of AO|5 Point Setup

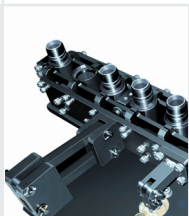
AUTOMATED OPTIMIZED AO|5 POINT SETUP



AO|1

Nozzle Spatter Removal

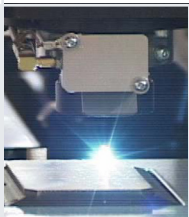
Maximizes the time between necessary operator intervention.



AO|2

Nozzle Changer

Automatically loads the correct nozzle for the material being cut.



AO|3

Focal Point Inspection / Lens Replacement

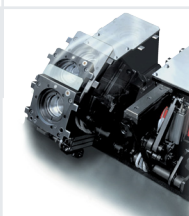
Lenses are optically checked and replaced automatically.



AO|4

Nozzle Inspection / Replacement

Nozzles are optically checked and replaced automatically.



AO|5

Torch Changer

Automatically changes the torch based on your program.

Mazak's exclusive AO|5 Point Setup automates the setup process with optimized cutting parameters. It can significantly improve your productivity and cost of operation, especially with today's focus on smaller batch sizes. AO|5 Point Setup is a core component of HyperLean™ strategies and is exclusively available on Mazak's HyperGear and HyperTurbo series machines.

Automation Beyond Material Handling - Reducing Operator Dependency

Many laser manufacturers consider material handling as the only important form of automation for laser cutting machines. They utilize comprimized settings when cutting varied materials to enable their machines to continue to operate with limited operator intervention. This significantly reduces the effectiveness of their machines. Mazak has developed leading edge technology that automatically sets up the machine, checks for wear on critical components and adjusts to optimize cutting parameters. AO|5 Point Setup significantly reduces part production cycles, especially for smaller batch sizes.

How Optimized Cutting Utilizing AO|5 Technology Lowers Your Cost of Operation and Improves Your Cash Position

The result of AO|5 Technology is typically a 25% or greater increase in throughput while significantly reducing operator intervention. Proper nozzle selection significantly reduces assist gas consumption. Below is an analysis of the potential impact to a full years laser production and the dramatic economic impact of AO|5.

| Material | 5'x10' sheets per year | Compromised Single Lens | | AO5 Optimized | |
|--------------------------------------|------------------------|-------------------------|-------------|---------------|-------------|
| | | Lens | Time (Secs) | Lens | Time (Secs) |
| .125" Aluminum | 100 | 7.5" | 85800 | 5" | 82100 |
| .048" Mild Steel | 500 | 7.5" | 337500 | 5" | 267500 |
| .075" Mild Steel | 1000 | 7.5" | 809000 | 5" | 620000 |
| .120" Mild Steel | 1000 | 7.5" | 1044000 | 7.5" | 827000 |
| .250" Mild Steel | 2000 | 7.5" | 3550000 | 7.5" | 2458000 |
| .500" Mild Steel | 2000 | 7.5" | 5998000 | 7.5" | 4556000 |
| 1.00" Mild Steel | 500 | 7.5" | 2608500 | 7.5" | 2579000 |
| .038" Stainless | 500 | 7.5" | 273000 | 5" | 194500 |
| .060" Stainless | 500 | 7.5" | 306000 | 5" | 248000 |
| Total Seconds (fixed nests) | | - | 15011800 | - | 11832100 |
| Total Hours (fixed nests) | | - | 4170 | - | 3287 |
| Annual Assist Gas Consumption | | 1373740 Ft3 | | 477250 Ft3 | |

Contact Mazak for a detailed review of the entire model based on nested 5'x10' sheets or to input your actual materials for an economic impact analysis specific for your company.

No matter how easy a manual setup is - it is always operator skill dependent and never unattended.

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