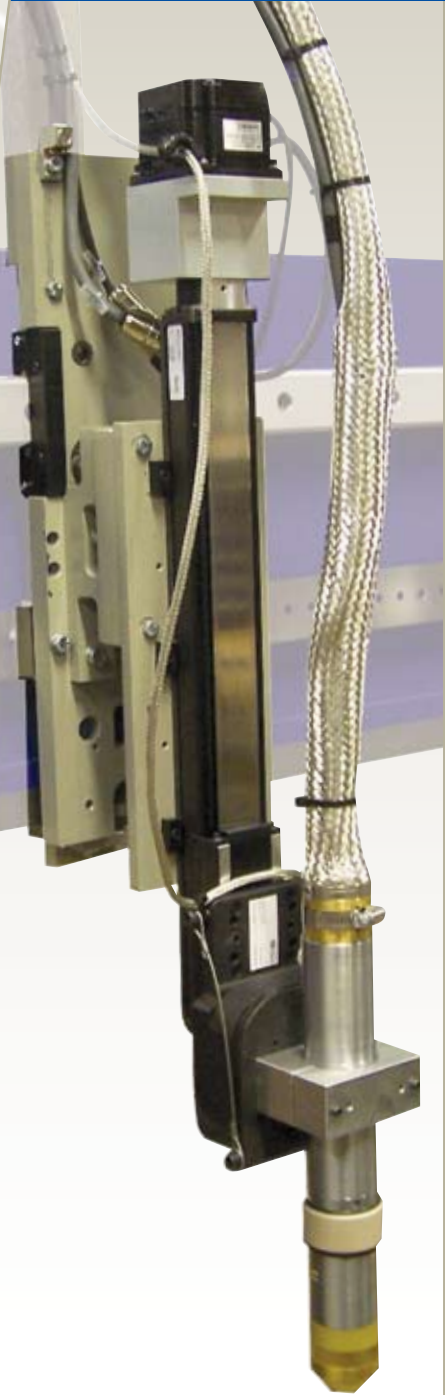


PL-1

Plasma Torch Lifter and Height Control



Overview:

The MG PL-1 torch lifter combines plasma arc voltage monitoring with a CNC closed loop positioning axis to greatly enhance plasma height control. As accurate height control is very important in plasma cutting, this combination provides a higher duty cycle and better cut quality.

Features and Benefits:

- Ultra fast positioning of 880 IPM, with 0.75g acceleration, increases productivity by minimizing non-productive time.
- Retract height between pierces can be set to a minimum, reducing cycle time.
- Initial height is accurate on all materials (thick or thin) since it is not dependent on torch pressure.
- Torch will follow an abrupt height change or a bowed sheet without overshoot so machine can operate without intervention.
- Torch height monitored every millisecond for precise control.
- Auto kerf crossing and torch collision detection increase productivity through automation.
- Motor mounted encoder provides very tight feedback loop.

System Description:

The MG PL-1 torch lifter height control is accomplished in the CNC software, resulting in less hardware and more reliability. The system is flexible and allows the user to:

- Program pierce height, retract distance, IHS slowdown height, and conditional height freeze.
- Set initial height sensing via ohmic position detection.
- Set the arc voltage range (50-300 volts DC).
- Make servo loop adjustments for position and velocity gain.
- Set semi or full automatic operation.

Application:

Available on TMC4500ST, MPC2000, Titan II and MetalMaster Plus machine models.

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