



# PL-1 PLASMA TORCH LIFTER WITH SURESTOP COLLISION SENSOR AND HEIGHT CONTROL

Messer Cutting Systems PL-1 Plasma Torch Lifter combines “plasma arc voltage” monitoring with a “CNC closed loop positioning axis” to greatly enhance height control in plasma cutting, resulting in a higher duty cycle and better cut quality. Coupled with the Surestop Collision Sensor if a collision occurs while cutting the magnet that holds the torch rigidly in place breaks free and the process shuts off. The torch is protected from damage due to programming errors, obstructions on the cutting table and improper material positioning. Resetting after collision takes only a few seconds.

## FEATURES AND BENEFITS

- **Ultra fast positioning of 880 IPM with .75g acceleration increases productivity by minimizing non-productive time.**
- **Torch lifters utilizing Messer Optimized System Technology have reduced cycle times as much as 30% over previous designs.**
- **Optimal positioning of the plasma torch produces quality parts that require little to no secondary operations.**
- **Non-productive time is greatly reduced with an Adaptive IHS system that “learns” the height of the plate on the cutting table.**
- **Includes Messer proven arc voltage sampling system to compensate for plasma electrode wear while producing accurate, repeatable parts.**
- **Process optimization feature minimizes up/down time of the torch(es) between pierces.**
- **Automatic consumable wear detection reduces operating costs to free the operator to perform other duties.**
- **Surestop Collision Sensor is quick, simple and easy to realign for torch protection.**

## SYSTEM DESCRIPTION

PL-1 Torch Lifter Height Control is programmed within the Global Control resulting in less hardware and more reliability. The system is flexible allowing 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.
- Settings semi or full automatic operation.

## APPLICATION

Available on the EdgeMax, PlateMaster II, Titan III, MPC2000, MPC2000 MC and TMC4500 DB machine models.

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