

# PRODUCT REVIEWS

## Reduced piercing times on steel

**Thermal Dynamics®** Automation has upgraded its 400-amp cutting system — featuring Ultra-Cut® 400 XT power source, XT torch with QuickPierce consumables and iCNC Performance Controller — to reduce piercing time by up to 40% on mild steel thicknesses ranging from 30 to 50mm. Faster piercing time reduces cycle time, especially for plates with a complex parts nest.

Thermal Dynamics has also improved the front-end components on its 400-amp consumables and made several other arc-starting enhancements designed to increase parts life, cut longer between consumable changes and lower total cut cost.

"We improved the gas flow routine within the Ultra-Cut® 400 XT high-precision power source and the 400-amp QuickPierce consumables feature more shielding gas ports on the shield cap," explained Dirk Ott, VP - Global Mechanised Plasma Systems, Thermal Dynamics Automation. "By increasing gas pressure during arc start, we reduce pierce time. Combined with the additional shielding gas ports, we deflect more molten metal away from the consumables. Thermal Dynamics offers a robust solution for cutting steel up to 50mm thick."

The company has further improved consumables' life by adding pierce-on-the-fly and pierce-puddle-avoidance routines within its iCNC Performance Control. Traditional piercing



routines keep the torch positioned over one spot until the plasma jet pierces completely through the plate. Once the controller senses the pierce, it then moves the torch along the cut path. This routine inherently exposes the consumables to more molten metal.

"Pierce-on-the-fly starts moving the torch after about one-third of the total pierce time," said Ott. "The groove behind the torch provides an evacuation path for the molten metal, reducing its impact on the consumables. Also, you don't have to cut through slag puddle at the end of the cut, which promotes a cleaner cut."

Pierce-puddle-avoidance also extends consumables life by preventing the front end of the torch from touching the puddle during arc start. During arc start, the torch touches the plate, moves to an arc initiation height

(which is relatively low) and starts the arc. After a split second, the controller raises the torch to a higher level, holds it there until the arc penetrates the plate and then lowers the torch to cutting height.

"Pierce-puddle-avoidance keeps the torch at a higher level for a second or two longer to minimise the impact of spatter and the chance of touching the puddle," explained Ott.

Additional enhancements to 400-amp consumables extend life, lower total cost and promote consistent cut quality on material up to 50mm.

The company also offers a cost savings calculator that enables fabricators to see how much they can save by upgrading to a Thermal Dynamics system. ■



[www.thermal-dynamics.com](http://www.thermal-dynamics.com)

## New releases of 123insight and 123mobile

**123 Insight** Limited has just announced the release of v10.12 of its core 123insight MRP/ERP manufacturing software and v1.45 of its 123mobile stores and shop floor tablet-based software.

"123insight v10.12 allows users to store EORI (Economic Operators Registration and Identification) numbers against both customers and suppliers, which can then be easily added to any documents or reports. The optional Data Import Toolkit has also been updated, allowing companies migrating to 123insight to automatically import these fields. V10.12 also includes the ability to restrict miscellaneous transactions by location ratings, such as allowing or denying

staff to adjust existing batches or perform unplanned issues from stock," explained the manufacturer.

123 Insight's tablet-based app 123mobile v1.45 includes several new functions to aid staff in stores and on the shop floor. Users can now issue a part to multiple works orders simultaneously, with the ability to view any batches that were issued along with any serial numbers. Stores requests can also now be issued directly from the app, and users can also now perform partial bin transfers of selected batches.

Simon Badger, Managing Director, 123 insight Ltd.



Simon Badger, the company's managing director, commented: "These enhancements to 123insight continue to help manufacturers navigate the complexities of Brexit, while 123mobile allows companies to move away from PCs in the stock room and on the shop floor, instead giving the staff the opportunity to use low-cost tablets. This means less walking, no sharing a PC and greater social distancing."

All 123insight customers can update to the latest version at no cost under the monthly subscription. A remote update service is available for £295. ■



[www.123insight.com](http://www.123insight.com)