

Effective, economical and versatile cutting solutions

Eugene van Dyk, ESAB South Africa's regional product manager for cutting and gas equipment, talks about two recently released innovations: the lightweight and portable ESAB Crossbow HD system, and the new Eagle CS, a compact and economical CNC cutting machine.

"ESAB continues to advance the state-of-the-art in thermal cutting systems. Along with portable and fixed-bed CNC cutting systems that can accommodate gas and plasma cutting processes, ESAB also offers industry leading safety features that meet or exceed the demanding regulations in local and global machinery directives," begins Van Dyk.

ESAB's latest Crossbow HD system

ESAB's Crossbow mechanised shape cutting solution is compact and lightweight for easy transport to where cutting needs to happen. Automated functions and a user friendly CNC provide powerful and versatile oxy-fuel or plasma processing in a value-minded package. "Crossbow's simple, menu-driven interface makes operation easy to learn and oxy-fuel, plasma or both oxy-fuel and plasma CNC cutting can be accommodated. A fully integrated state-of-the-art CNC system eliminates the need for the user to add a separate controller to the system and the simplicity of the design makes it portable and economical," Van Dyk says.

Ideal for use in small fabrication shops, maintenance and repair shops, trade schools, on construction sites, and for plant shutdowns, the Crossbow system can accommodate oxy-fuel cutting and production piercing of 50 mm thick mild steel, with an edge capability of 100 mm.

"When using higher definition plasma cutting equipment, piecing and cutting of 15 mm can be easily accommodated with an edge capability of 20 mm," he notes.

"In terms of the Crossbow CNC manipulator, an effective cutting width of 1 500 mm with length options of either 3.2 m or 6.8 m are available, which makes the system ideal for the varied range of jobbing tasks at busy workshops or construction sites," Van Wyk tells *African Fusion*, adding that maximum traverse speeds of up to 6 000 mm/min can be achieved using the system.

For plasma cutting, the Crossbow is coupled to ESAB's A120 automated air plasma cutting system and 1Torch plasma torch, which are part of ESAB's proven industrial

platform and offer the features generally associated with other automated applications. "With all the reliability advantages of 1Torch, the automated A120 Plasma delivers the best-in-class productivity, precision and performance," says Van Dyk.

A120 Plasma features include:

- SL100® SV 1Torch® start technology, which eliminates electronic interference and provides a strong pilot arc for quick and reliable starting.
- The auto-pilot restart function, which enables the A120 to cut expanded metal quickly and easily.
- The SL100 torch with standard ACT Quick Disconnect, which offers tool-less quick torch disconnection for easy changeovers between mechanised and manual cutting.

Eagle CS automated cutting machine

The EAGLE CS offers high productivity, exceptional performance, great value with easy operation, delivering performance and long service life for light fabricators that need reliable productivity.

Features include:

- Strength: Robust frame design that offers high performance and long service life.
- Performance: High speed, excellent precision and smooth motion that produces higher quality parts.
- Productivity: Technological innovation and automation of the entire process produces the highest productivity in any application.
- Unitised design: Fast and easy installation, minimum floor space, and easy load/unload thanks to the compact, unitised design.

"The EAGLE plasma cutting system is designed for precision plasma applications. It combines high productivity, exceptional accuracy

For plasma cutting, the Crossbow is coupled to ESAB's A120 automated air plasma cutting system and 1Torch plasma torch.



The EAGLE CS delivers performance and long service life for light fabricators that need reliable productivity.

and sophisticated process integration to deliver the highest cut quality parts at the most economical price," Van Dyk says.

"ESAB can also provide automatic setting of these cutting machine with plasma parameters including gas pressure and type. A full set of cutting parameters is automatically locked in by simply selecting the appropriate thickness on the supplied database," he adds.

"While ESAB is globally renowned for large automation systems, such as those used for wind tower manufacturing, the Crossbow HD and the Eagle CS cutting systems make state-of-the-art technology accessible to small workshops and SMEs. They are affordable solutions that offer excellent flexibility without having to make compromises, Van Dyk concludes. ■

Eagle CS specifications

Effective cutting width	1 500 mm
Effective cutting length	3 000 mm
Overall space requirement	2 730 x 3 830 mm
Max travel speed	6 000 mm/min
CNC controller	HG616 with 10" colour LCD
Available plasma options	A40i, A60i, A120
Plasma cutting range	3 to 20 mm
Oxy-fuel	Up to 30 mm as optional
HVAC cutting	Plate rider as optional
Height control	Arc voltage height control
Cutting table	Water bed (down draft optional)