

Powermax SYNC: smart and simple cutting and gouging

Hypertherm® and local premier partner B.E.D. have partnered to deliver the advanced Powermax® SYNC plasma cutting solution locally, which is not only high-performing but also supported by in-depth after-sales service and a shared commitment to customer success. Tim Sivewright, Distribution Sales Manager for Hypertherm in South and sub-Saharan Africa, and Craig Bister, B.E.D. Group Manager for the Welding and Cutting division, explain.

Plasma cutting, according to Hypertherm's Tim Sivewright, is fast becoming a cost-effective, high-speed cutting solution for metals up to 50 mm thick. Especially in mild steel, plasma offers faster cutting speeds than oxyfuel cutting, and better affordability than fibre lasers for mechanised fabrication.

"In general fabrication, mining, agriculture and structural steel applications where cutting quality, speed and cost matter more than micron-level precision, Hypertherm offers hand-held plasma cutting systems which are far safer, faster and easier to use than oxy-acetylene gas cutting equipment and deliver far superior cut quality. Also available are mechanised systems that are often more than adequate alternatives to expensive laser cutting options," says Tim Sivewright, adding that at the recent

NAMPO agriculture expo in May this year, B.E.D. successfully demonstrated and sold a Powermax65 SYNC directly off their outdoor stand, proof of this sector's growing requirement for cutting affordability and ease-of-use.

Citing another B.E.D. success story, he recalls that, during Covid, the mining sector experienced severe oxygen shortages, which paralysed oxyfuel cutting operations. "B.E.D. stepped in with its Powermax30 Air solution, the smallest in the Hypertherm range. With its own built-in compressor, this powerful little machine can deliver an 8.0 to 10 mm finish cut and a 16 mm severance cut. B.E.D. sold about 90 of these machines to replace oxyfuel systems during the worst Covid year," Sivewright informs AF.

If cutting any metal thinner than about 50 mm, Sivewright says that plasma cutting will be far faster than any oxyfuel cutting process, and it will deliver a cleaner finish. "The process is also safer. No flashback arrestors are required, there are no hoses, no torch and no flame, so all those safety regulations around the use of explosive gases do not apply," he says.

"The plasma process, especially when using a smart Hypertherm Powermax SYNC cutter, is also far easier to use than any of the gas cutting processes. Almost anyone can be shown how to comfortably do a severance cut in 10 minutes," he suggests.

The Hypertherm Powermax SYNC® range

On the hand-held Powermax SYNC® range of smart plasma cutters, he says that the range starts with the Powermax45 SYNC, a 45 A plasma gouging, cutting and marking system, which offers a metal removal rate



Craig Bister, B.E.D. Group Manager for the Welding and Cutting division and Tim Sivewright, Distribution Sales Manager for Hypertherm in South and sub-Saharan Africa.

while gouging of 3.4 kg/h with controlled groove dimensions of 3.2 mm deep and 6.8 mm wide. In handheld cutting mode, the 45 SYNC can deliver a 16 mm profile cut and a severance cut of up to 29 mm.

The range also includes the Powermax65 SYNC, Powermax85 SYNC and the Powermax105 SYNC, for gouging and cutting up to 32 mm material. "All the machines in the Powermax SYNC® range are designed for drag cutting, bevel cutting, fine feature cutting, extended reach cutting, controlled gouging and marking," Sivewright notes.

The smart cartridge-based system

Key to making Powermax SYNC plasma cutting easier than ever is the built-in intelligence of the single-piece cartridge for the plasma torch. "Hypertherm has revolutionised plasma cutting and gouging with its innovative range of plasma cutting cartridges, which make cutting far easier and safer than traditional plasma systems that depend on multi-component torch consumables," Sivewright continues.

"Cutting off the lifting hooks on a vessel or structure, for example, is very difficult with oxyfuel cutters, and if using a traditional plasma cutter, a significant amount of grinding will be required after cutting, because it is impossible to get a flush cut with any traditional oxy-fuel or plasma torch," he tells AF.

Hypertherm's FlushCut™ smart cartridge, however, makes this task easier than ever. Designed with a 45° bevel to enable the operator to slide the torch along the edge of the hook, and a nozzle angle

which directs the plasma arc horizontally, this cartridge enables a lifting hook to be cut off leaving a flat finish with only a few millimetres of residual material.

Different colour-coded cartridges have also been developed for each different plasma cutting, gouging or marking task. "As well as the black FlushCut™ cartridge, there is a yellow drag cut cartridge for easy hand cutting, a green cartridge for gouging and, for mechanised cutting on a table or tractor, we have a purpose-designed grey cartridge," he says.

"Hypertherm is the only plasma equipment manufacturer in the world that has built its machines around this innovative, industry-first smart cartridge system. Each cartridge has an RFID identifier that communicates with the plasma power source to set the appropriate mode: drag cutting, flush cutting, gouging or marking, for example."

The RFID-enabled cartridges also enable the power source to monitor usage and communicate with the system, providing an early warning if the consumable is nearing its end-of-life. "And although the cartridges might cost a little more than a traditional pack of separate consumable components, one cartridge lasts up to five

times longer than traditional plasma consumables, and there is no complicated disassembly and reassembly process involved in changing a cartridge.

"Tool-free installation and automatic set-up reduce operator error, while the combination of improved cut quality, longer consumable life, and faster, error-free cutting lowers the total cost of ownership compared to traditional plasma and oxyfuel cutting," confirms Sivewright.

B.E.D.'s welding, cutting and repair network

With dedicated welding service centres in Gauteng and Cape Town, B.E.D. offers customers full lifecycle support for Hypertherm products, including training, onboarding and repairs. These centres are staffed by seasoned welding and cutting experts, providing customers with highly skilled and responsive support from professionals who understand South African industry.

"Our growing branch footprint of 11 branches nationwide ensures that we can deliver welding and cutting products where our customers are, and where they are needed most. From on-site demonstra-



Different colour-coded cartridges have been developed for plasma cutting, gouging or marking tasks: black for flush cutting; yellow for drag cutting; green for gouging and grey for mechanised cutting on a table or tractor.

tions to customised onboarding, we assist customers to deploy Hypertherm systems quickly and effectively, whether helping shop floor personnel to achieve better manual cut quality and efficiency, retrofitting local CNC cutting tables, or integrating systems into modern fabrication lines," says Craig Bister.

Sivewright adds: "With rising competition from low-cost imports, we can offer a smart value proposition built on cutting quality, uptime and technical confidence. The Hypertherm Powermax SYNC system is designed to lower operating costs over time, while B.E.D.'s comprehensive support ensures customers can extract full return-on-investment from every machine," he concludes.

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