

THE SPEED WELDING PROCESSES

Speed translates to productivity.



The Lorch speed processes.

SpeedPulse XT – Extra fast. Extra low-spatter. Extra proficient handling.

SpeedPulse XT turns you into the undisputed Master of the Arc. This is assured by the patented control technology of the Lorch S series. It combines the new process and all of the benefits of the earlier SpeedPulse welding process.

Instead of making him break out in a sweat during pulse welding, the SpeedPulse XT afford the welder such extra freedoms as the ability to influence the arc by changing the distance between torch and workpiece. And, it delivers this type of speed and accuracy in every pulse phase.

These properties allow the welder to guide the arc more safely and intuitively and to transfer even the slightest correction into the welding process without any delay. The S series, thereby, produces results that you can see as well as feel.

When combined with the exceptionally robust and stable properties of the arc, this means: improved handling, higher quality, and very low to insignificant levels of spatter, reducing the amount of necessary rework to an absolute minimum. This is what we call welding at the pulse of time.



SpeedArc XT – deeply impressive.

SpeedArc XT sets itself apart by its highly focused and incredibly stable arc combined with an high energy density that stands head and shoulders above any other comparable process. Delivering much deeper penetration into the base material across the entire power range, this process delivers a level of penetration for the P and S series to which ordinary MIG-MAG machines simply cannot measure up. The greater arc pressure that flows into the weld pool SpeedArc XT adds a significant speed boost to MIG-MAG welding across the entire power range, making it noticeably faster, much easier to control and, consequently, much more economical.

TwinPuls XT – really looks fantastic.

TwinPuls XT specifically controls and separates the heating and cooling phases. What does that mean to you? You benefit from a cosmetically pleasing weld seam, with significantly lower and more controlled heat input into the workpiece. The better heat control, can result in much lower distortion, resulting in notably less rework. What is more, the isolation of the different phases makes positional welding much easier. Real-world applications that commonly used to be completed by TIG welding can now be welded with MIG-MAG

processes thanks to the ground-breaking capabilities of the new and improved TwinPuls XT. Welding is now simply faster and more efficient. Producing no cold starts or end craters whatsoever, TwinPuls XT achieves perfect results that even stand up to TIG seams. There is one end to everything, except when you talk about weld seams. They have not one but two ends and both look astounding thanks to TwinPuls XT.

All the benefits of TwinPuls with the maximum of speed

No cold places
The danger of cold places at the start of the weld is a thing of the past. Increased energy transfer ensures a completely fused start.

TIG-like appearance

Without end craters
The welding current is automatically reduced at the end of the weld. So, end craters are now a thing of the past. And the automatic end pulse ensures that the wire end finished without ball at the end – so the next ignition is performed perfectly.

SpeedUp – experience an entirely new high during vertical seam welding.

Up to now, vertical seam welding required a tremendous amount of experience, skill and a steady hand. Now, professionals in industry have a simple-to-use tool at their disposal – Lorch’s P and S series – which treat them to a perfectly coordinated welding process that is powerful enough to even substitute the supreme discipline of the trade – “Christmas tree welding”. SpeedUp combines the hot high-current phase with the cold phase to effect an overall reduced heat input – thereby, offering great penetration, exactly dimensioned and well-proportioned weld seams with a near perfect a-measurement dimensions. Unparalleled arc regulation delivers outstanding speed and produces results that is seamless and with virtually no spatter.

On the left, the challenging Christmas tree, and, on the right, the ingenious SpeedUp.

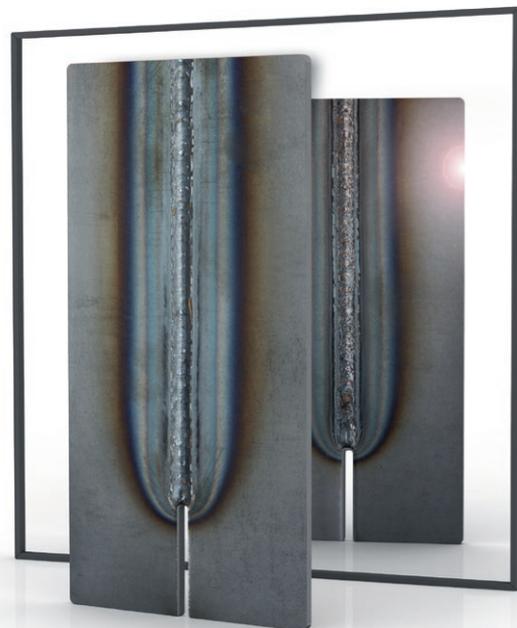


SpeedRoot – for visibly enhanced MIG-MAG root welding quality.

Previously, the main requirement for joining both edges of the material perfectly and with as little defects as possible was to apply this simple formula: Root welding = TIG.

Whilst enabling clean results, the application of this process was also exceedingly slow. SpeedRoot delivers dramatic speed benefits as well weld seams whose quality is on par with TIG welds. This superior performance is made possible by the high-end control technology that is built into every machine of the P and S series! This technology controls the level of current and voltage with utmost precision, thereby guaranteeing high speed process reliability and flawless weld appearance. Anyone who has ever bridged a 4 mm gap on 3 mm sheets without weaving using the S series and SpeedRoot will never want to go back to the solution they used before. Especially when they discover that the perfect weld seam they are looking at took them much less time than it would have if they had resorted to TIG welding.

The weld front side and, as a mirror image, the weld rear side showing under bead.



Optimum, slightly rounded weld appearance without fusion defects – for maximum gap tolerance and gap bridging.

SpeedCold – for cold hard efficiency whilst thin sheet welding.

SpeedCold keeps the arc stable during thin sheet welding and puts an end to pesky sticky spatter. The Lorch P and S series with SpeedCold will even weld sheets as thin as 0.5 mm and eliminates the need for rework almost entirely. Any spatter that does occur is so "cold" that it will usually not stick to the material. SpeedCold truly shines when used for welding butt, lap and corner welds on thin sheet metal. Responding in milliseconds to any changes in the arc, the SpeedCold control is distinguished by its exceptional weld seam control as well as the outstanding seam shaping and gap bridging properties, especially on CrNi and Steel. Lower heat input means less rework thanks to less distortion, less spatter and reduced use of energy. And, we have not even talked about the speed advantages this process has to offer. You cannot ask for much more.



A welded corner seam as a comparison.
 Standard arc (left): Rapidly falling weld pool that is about to drop off.
 SpeedCold (right): Welded in full with utmost speed and reliability (35 cm/min).

The standard MIG-MAG welding programs.

Last, but not least, Lorch also gave the synergy welding programs included with the P and S series a complete overhaul, taking them to an entirely new level. This means for you: exceptional arc behaviour that is fully customisable to your preferences thanks to the new dynamic control.

Lorch welding process at a glance

	S-SpeedPulse XT	P series	MicorMIG Pulse series	MicorMIG series
Welding process				
SpeedPulse XT	●	–	–	–
SpeedArc XT	●	●	–	–
TwinPuls XT	●	–	–	–
SpeedPulse	●	–	–	–
Pulse	●	–	●	○
SpeedArc	●	●	○	○
TwinPuls	●	–	–	–
SpeedUp	○	○	○	○
SpeedRoot	○	○	–	–
SpeedCold	○	○	–	–
Standard MIG-MAG welding programs	●	●	●	●

● Configuration options ● Standard equipment ○ Optionally available

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