



Lorch's "cold" process. Perfectly For low-spatter and highly prod

Steel and stainless steel – weld thin sheet metal about 40% faster.

The daunting challenge you face when trying to optimise thin sheet metal welding is arc control. Reducing the energy input is fast and easy, but the application of such a "cold" procedure will definitely show: you will end up with numerous places of sticky spatter and reduced arc stability. This will make it necessary for you to spend a great deal of time on rework. We can understand that this is not your definition of productivity. It is not ours, either. This is why Lorch's engineers and welders were not satisfied to quickly launch a half-baked process that reduces energy input by somewhat. Instead, they focused on optimising their designs time and again until they finally reached their objective: developing a thin sheet metal process that fully satisfies the requirements of our customers. This design makes it possible for you to sustainably increase your productivity across a wide range of applications – with speed gains of up to 40% and in a quality that wins over even the most hands-on welder.

I-seam, CrNi t=1.5 mm, root gap = 1.2 mm



SpeedCold: Wire feed 6.0 m/min,
Welding speed 62.3 cm/min



Short arc: Wire feed 4.3 m/min,
Welding speed 42.4 cm/min

A speed gain
of up to 40%



Standard short arc welding

Corner seam, PG,
S235 t=3.0 mm
Wire feed 4.0 m/min,
rapidly advancing weld pool
that is about to drop off

SpeedCold

Corner seam, PG,
S235 t=3.0 mm
Wire feed 4.0 m/min, welded
completely and securely.
Welding speed 35 cm/min

Lorch SpeedCold

controlled energy input.
active thin sheet metal welding.

MIG-MAG perfection starts at 0.5 mm sheets.

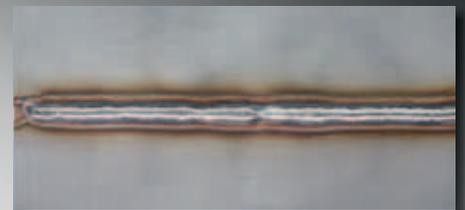
The conventional MIG-MAG short arc process already exposes its limits when welding 1 mm steel and stainless steel sheets. SpeedCold goes for beyond that. It allows you to weld sheets as thin as 0.5 mm in a reliable fashion and with next to no spattering. And, even if spattering occurs, it is normally not necessary at all to grab your finishing tools. The spatter left behind during SpeedCold welding is generally “cold” enough not to stick to the workpiece surface. A swipe of the glove is all it takes to remove it.

Perfect for butt, lap and corner weld seams.

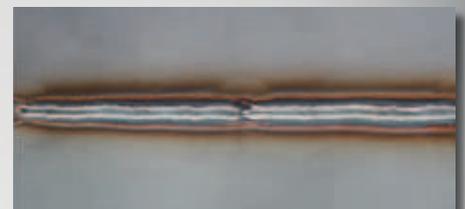
Superior thin sheet metal welding is measured by the quality of the butt, lap and corner weld seams you create. This type of application is exactly the purpose for which Lorch developed SpeedCold. SpeedCold controls every sequence of the process with such accuracy that any changes in the arc are regulated within a matter of milliseconds. This results in an extremely stable arc and exceptional weld pool control. As it offers outstanding seam shaping and gap bridging properties, SpeedCold allows the welder for instance in case of material distortion to react in an optimal way.

Temper colours reveal the difference.

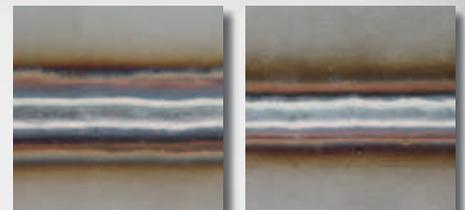
The heat that is introduced into the workpiece is a decisive factor for the extent of preliminary work and rework necessary to achieve a satisfactory welding result. Lower heat input means less distortion. Fewer tack welds are necessary and preliminary work and rework necessary to mould the material into the desired shape are cut down. Every joule you save puts more money in your pocket. Since SpeedCold in each millisecond puts only so much energy into the process, the heat input is reduced by 25% when compared to conventional MIG-MAG welding, an important factor in particular for CrNi welding. As CrNi has a lower heat conductivity and tends to deform more easily, the reduced heat input applied by SpeedCold offers substantial practical benefits. You also will experience minimised alloying element melting loss and, consequently, longer lasting corrosion protection even when welding galvanised metal sheets.



I-seam, CrNi t= 0.5 mm, no root gap
SpeedCold: Wire feed 2.0 m/min,
Welding speed 53.8 cm/min



I-seam, CrNi t = 0.8 mm, root gap = 0.8 mm
SpeedCold: Wire feed 2.8 m/min,
Welding speed 60.0 cm/min



Short arc: Wire feed 4.3 m/min, welding speed 42.4 cm/min	SpeedCold: Wire feed 6.0 m/min, welding speed 62.3 cm/min
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