

WiseFusion

STRIKINGLY FAST MIG WELDING

"With WiseFusion it is possible to weld on the molten weld pool in 10 mm air gap."

– Welder, Inha Mills, Finland



OPTIMIZED WELDING FUNCTION FOR QUALITY, SPEED AND EASE OF USE

WiseFusion optimized welding function produces a very narrow and energy dense welding arc making welding faster and heat input lower. Focused penetration area allows the welding of narrow and deep grooves. WiseFusion results in excellent penetration without a risk of undercut. Narrower arc also facilitates weld pool control in position welding. WiseFusion ensures optimum arc length eliminating the need for constant parameter settings. Adaptive and automatic arc length regulation maintains the arc always within the short circuit boundaries and raises your arc-on time.

KEY BENEFITS



MORE WELD
With pulsed WiseFusion



SAVING IN GROOVE AREA
When combining WiseFusion and WisePenetration



LOWER HEAT INPUT
Than in traditional MIG/MAG welding processes, delivering savings in rework costs

KEY APPLICATIONS



ALUMINUM BOATS



LIFTING EQUIPMENT

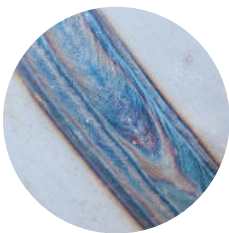


TANKS AND SILOS

BENEFITS

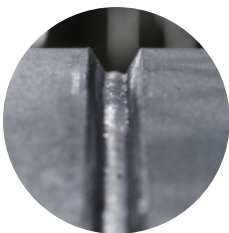


- Higher welding speed
- Lower heat input resulting in less distortion and better mechanical properties of the weld
- Possibility to weld narrower and deeper grooves
- Excellent weld pool control in position welding
- Easy to weld in all positions
- Automatic arc length control granting always the right parameters
- Easy to use
- Uniform weld quality



WELD 25% MORE PER YEAR

WiseFusion makes it possible to weld at a significantly higher speed, providing the same quality level and throat thickness as with a conventional spray and pulse arc. Synergic fusion is 20% faster than 1-MIG and pulsed fusion, and even 38% faster than conventional pulse welding. Welding speed increases from 60 cm/min to 72 cm/min, and arc-on time is 4% higher as there is no need for arc length adjustments (50-52% duty cycle). One of our use cases actually proved that you can weld 161 km (25%) more during the year with WiseFusion!



GAIN OVER 25 % ANNUAL SAVINGS IN FILLER MATERIAL

Combine WiseFusion with WisePenetration and you can narrow the groove angle for example by 26%, from 45 to 30 degrees. This way fewer welding runs are needed to complete the joint, which results in reduced welding time and less filler material is required. As a result you can reach e.g. 26 000 € annual savings in filler material only as in one of our use cases.

Using WiseFusion and WisePenetration simultaneously provides many benefits, especially when welding thick butt joints. The high energy density of the arc provided by WiseFusion combined with the constant penetration, regardless of the stick out length, delivered by WisePenetration makes it possible to weld in deep, narrow grooves.

A study carried out by the Lappeenranta University research group in cooperation with Helsinki Arctech shipyard showed that it is possible to reduce the joint angle from 45° to 30° degrees.

TECHNICAL SPECIFICATIONS

WiseFusion

Product code

9991014