

DPMIG, Double Pulse MIG

Advantages

- **MORE FORGIVING OPERATION**

Minimal distortion, even when gap conditions and wire placement vary.

- **LESS OPERATOR SKILL REQUIRED**

Outstanding control of arc characteristics, making it easier to produce excellent welds.

- **UNIFORM BEAD APPEARANCE**

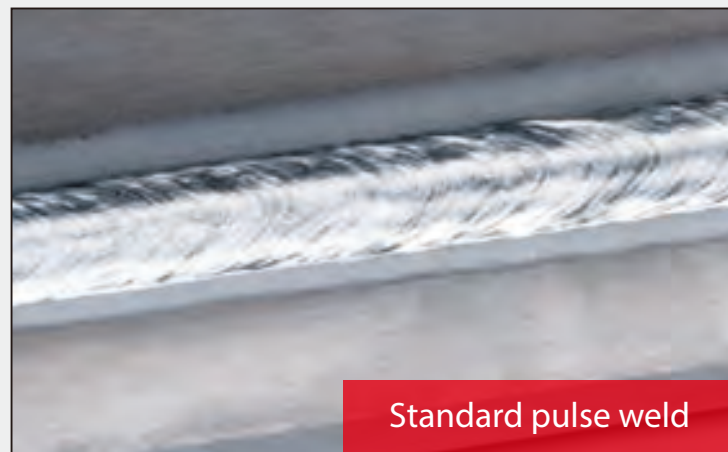
Rippled bead appearance requires no weaving to produce a uniform bead.

- **EXCELLENT PENETRATION**

Controls the arc length and heat input together for excellent penetration profile.

- **OUTSTANDING ARC HEAT CONTROL**

Controls the arc heat, making it ideal for welding thinner materials.



Standard pulse weld



Double Pulse aluminum weld

Conditions for all weld samples:

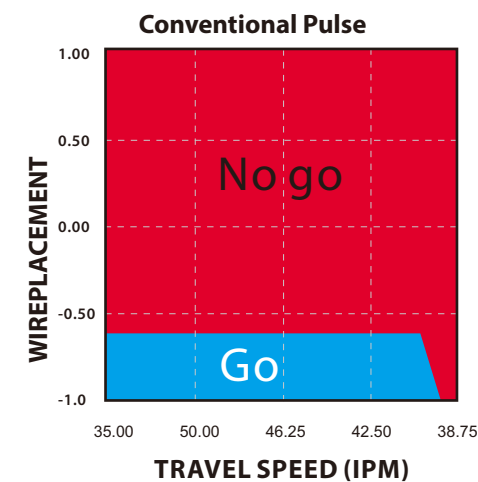
Electrode - 1.2 mm diameter 4043 Aluminum

Shielding Gas - 100% argon

Material - 3mm thickness aluminum

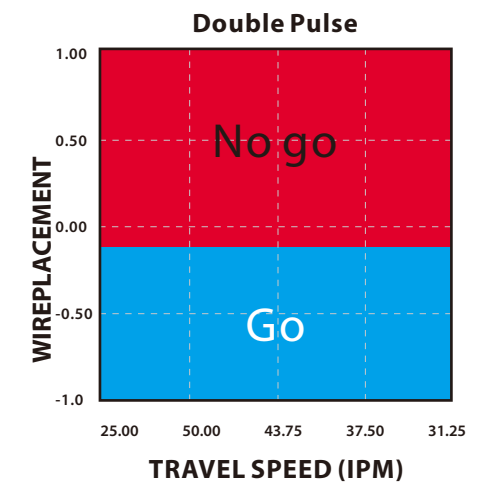
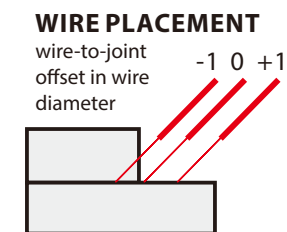
Comparing Double Pulse to Conventional Pulse

Wire placement influences weld shape and quality. In a series of design experiments over a range of travel speeds, the quality of Pulse-On-Pulse welds was less sensitive to variations in wire placement compared to welds made with conventional pulse.



The green area represents wire placement and travel speeds at which acceptable welds are made. The red area represents unacceptable welds.

*torch angle > 130
convexity < 0.75 mm
lack of fill = < 2.5 mm*

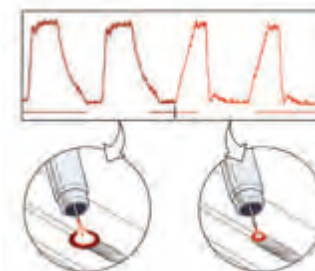


*Pulse-On-Pulse made good welds
at faster travel speeds over a wider
range of wire placement.*

HOW

Double Pulse works

Using Waveform Control Technology, the welding machine alternates between high and low energy pulses. This combination of high and low pulses produces the "rippled" bead appearance.



The high energy pulses provide a hotter arc (longer arc duration), which improves cleaning action at the base material. The low energy pulses allow the weld puddle to cool, which controls the heat input for good penetration.

