



# Regulated Metal Deposition



- Deltaweld® with Intellix™ Elite
- Continuum™ System
- PipeWorx 400 System
- ArcReach® Smart Feeder with compatible power source

## Open Root



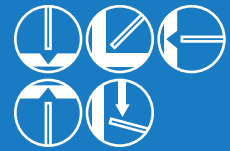
1/8 – 5/32 in.

## Material Thickness



22 gauge – 1/8 in.

## Welding Positions

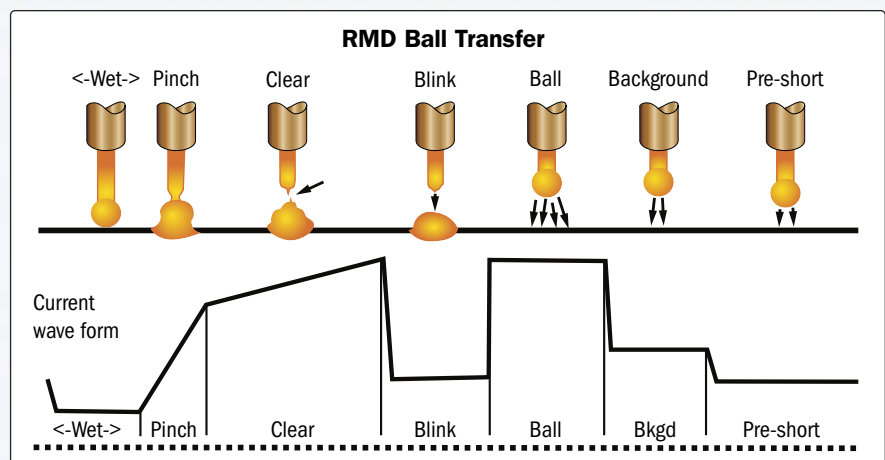


RMD is a modified short circuit GMAW process with low puddle turbulence, low spatter and superior puddle control.

RMD is an ideal option for open roots, thin materials and bridging gaps.

RMD is unique due to the low puddle turbulence which can improve the ability to fill gaps and minimize burn-through.

The versatility comes from controlled short clearing, which gives the welder the feel of conventional short circuit GMAW while being more stable and producing less spatter.



**Material applications:** steel, stainless steel, silicon bronze\*

**Industry applications:** open root, pipe, plate and vessel, heat exchangers, sheet metal fabrication, auto body, furniture, commercial kitchen products

\*Silicon bronze is available on Deltaweld with Intellix Elite and on Continuum Systems.

## RMD Benefits



### Low Puddle Turbulence

- RMD provides a smooth arc with less spatter, compared to conventional short circuit



### All Skill Levels Can Use It

- Inexperienced welders will appreciate the adaptiveness, while skilled operators can take advantage of the puddle control
- Less rework due to unwanted spatter, and lower heat input than pulse to reduce burn-through



### Simple Controls

- RMD is a synergic process which makes using it less intimidating to operators that haven't used it before



### Auto or Semi-Auto Applications

- Ideal for an operator that needs the ability to bridge gaps, minimize spatter and burn-through
- In robotic applications, RMD is used when travel speed is not critical, but quality and aesthetic appeal are paramount
- Could be used to replace automated TIG applications on thinner materials

## Feature Definitions

### Wire Feed Speed (WFS)

- Wire feed speed is the main control for RMD. This provides the user synergic control\* of deposition, amperage and voltage. This also gives the user a one-knob adjustment to change overall welding power.

#### Increase

- For more welding power for thicker materials
- For more deposition for faster travel speeds and increased bead size
- For more amperage and penetration
- For more puddle fluidity
- To create a flatter bead profile

#### Decrease

- For welding on thinner materials
- For welding out of position
- For less amperage and penetration
- For less puddle fluidity
- To create a more convex bead profile

### Arc Length

- Use this adjustment to fine tune the voltage for the application. As the user changes the arc length value they will see an increase or decrease in voltage.

#### Increase

- To reduce spatter production
- For better wet-in at the toes
- To improve arc stability/transfer
- To create a flatter bead profile

#### Decrease

- To provide more control of the weld puddle
- To create a more convex bead profile
- To help increase travel speed

### Arc Control

- Arc control shifts the weld power without changing the deposition. The power is shifted by changing the amount of time spent in the ball phase of the waveform. Arc control is normally adjusted when the user wants to fine tune the transfer for their application. An increase or decrease in arc control will adjust the size of the droplet.

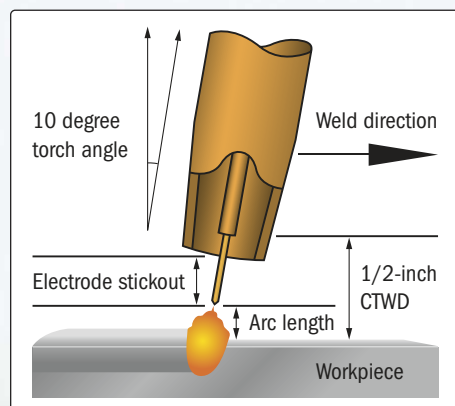
#### Increase

- To help clean up transfer and reduce spatter
- To provide a softer, slightly longer, wider arc cone — great for outside corner joints and to smooth the toes of the weld bead
- For more puddle fluidity

#### Decrease

- To provide a stiffer, shorter and narrower arc cone — great for joints that need a faster freezing puddle and thinner materials
- To create a more convex bead profile
- For less puddle fluidity

\*Synergic control is when the user changes the WFS, the voltage and amperage are changed accordingly for the deposition being commanded. Arc length (AL) and arc control (AC) do not need to be changed when changing wire speed. If the user likes a certain arc the AL and AC offsets will be applied at any point in the WFS range so they will always get the arc they like.



### RMD Torch Angles

- 0–15 degrees drag angle
- A drag angle is recommended

### RMD Contact Tip to Work Distance (CTWD)

- 3/8 to 1/2 inch CTWD
- Longer CTWD may decrease arc start quality and arc stability