

WELD RIGHT. EVERY TIME.

SKILLED HANDS. STRONG JOINTS. SAFE HABITS.



WELDING POSITIONS

The welding position describes the position of the joint as it is welded.

1F FLAT		Welded on a flat surface with the weld on top.
2F HORIZONTAL		Welded on a vertical surface with the weld running horizontal.
3F VERTICAL		Welded on a vertical surface with the weld running vertical.
4F OVERHEAD		Welded on the underside of a joint above the welder.

GOOD POSITIONING + CONTROL = STRONG, QUALITY WELDS

WELDING TECHNIQUES (WEAVES)

Weave (or stringer) technique helps fill the joint, control heat, and achieve the desired bead shape.

TECHNIQUE	PATTERN	BEST FOR...	KEY PERFORMANCE TIP
STRINGER (STRAIGHT)		Thin metal or deep penetration.	Move in a straight line with almost no side-to-side movement.
ZIG-ZAG		Wide gaps and vertical-up welding.	Pause at the sides to prevent undercut; move quickly across the center.
CIRCULAR		Overhead welding and flat positions.	Use small, uniform loops to spread heat and reduce spatter.
TRIANGLE (WEAVE)		Vertical-up and heavy structural joints.	Build a "shelf" with the weld metal to support the puddle against gravity.
WHIP & PAUSE		Open-root passes and dirty metal.	Whip forward to dig/penetrate, then return and pause at the edge to fill.
FIGURE-8		Thick plates and large fillet welds.	Move in a continuous "8" to spread heat evenly and avoid excess buildup.
CRESCENT		Cap passes and horizontal welds.	Good for keeping edges clean and achieving a smooth, wide finish.
J-WEAVE		Hot passes and lap joints.	A variation of whipping that pauses on each side to fix root pass mistakes.
BOX WEAVE		Wide grooves and root passes.	A structured back-and-forth motion that ensures flat, even coverage.
STRAIGHT-STEPPED		Multipass welding in all positions.	Move side-to-side while stepping forward to control depth and prevent undercut.

KEEP A CONSISTENT TRAVEL SPEED, ARC LENGTH AND ANGLE. PRACTICE MAKES PERFECT!

COMMON WELD JOINTS

BUTT JOINT Used to joint two pieces in the same plane.	T-JOINT One piece perpendicular to another.	LAP JOINT Edges overlap each other.	CORNER JOINT Forms a 90° corner (outside or inside).	EDGE JOINT Edges are placed side by side.
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GOOD WELDING HABITS

- WEAR PROPER PPE**
Helmet, gloves, jacket, and boots.
- KEEP IT CLEAN**
Clean metal = better welds. Remove rust, paint, oil and dirt.
- GOOD POSITION**
Comfortable position gives you better control.
- CHECK YOUR SETTINGS**
Right amperage, voltage and wire speed for the job.
- CLEAN AS YOU GO**
Remove slag and spatter.