



# MIG / MAG

# WELDING



**MIG** (Metal Inert Gas)/**MAG** (Metal Active Gas) or Gas Metal Arc Welding (GMAW) is a welding process where an electric arc is created using a power supply between a continuous consumable metal welding wire and the workpiece.

The arc fuses the two pieces of the workpiece and the welding wire to form a weld. The arc and weld pool are shielded using an inert (typically argon and helium) or active (mixtures of argon, carbon dioxide and oxygen shielding gas) fed through the welding torch, shielding the process from contaminants in the surrounding air. Because the welding wire is fed continuously through a wire feed unit and/or the welding torch, this process is sometimes referred to as semi-automatic welding and can also be easily adapted

for robotic automation.

Probably the most common welding process, MIG / MAG welding is much more productive than MMA (Manual Metal Arc) or Stick welding. The use of solid and flux cored wires has improved productivity by as much as 80-95 per cent and depositing weld metal at very high rates and in all positions.

MIG / MAG welding is widely used in a multitude of industrial applications including light to medium gauge steel fabrications as well as aluminium alloy fabrication, where high deposition rates are required, while the use of flux cored wires without a shielding gas is often found in heavy steel fabrications. ■

Image courtesy of: Kemppi