Shielding Gas

Shielding gas serves several important purposes when welding. Firstly, it protects the molten weld pool from atmospheric contamination, such as oxygen and nitrogen, which can negatively affect the quality of the weld. Additionally, by preventing oxidation and other contamination, shielding gas helps create a clean and stable arc for the welding process. This results in improved weld quality, strength, and overall durability. Lastly, the gas can also influence the mechanical properties of the weld, making it an integral part of the welding process.

Argon is commonly used in welding as a shielding gas. When welding, it is important to protect the weld from contamination by atmospheric gases such as oxygen and nitrogen. Argon is an inert gas, so it is effective in shielding the welding area and preventing the formation of oxides and nitrides that can weaken the weld. Additionally, argon is often used in tungsten inert gas (TIG) welding and is also used in some forms of metal inert gas (MIG) welding.

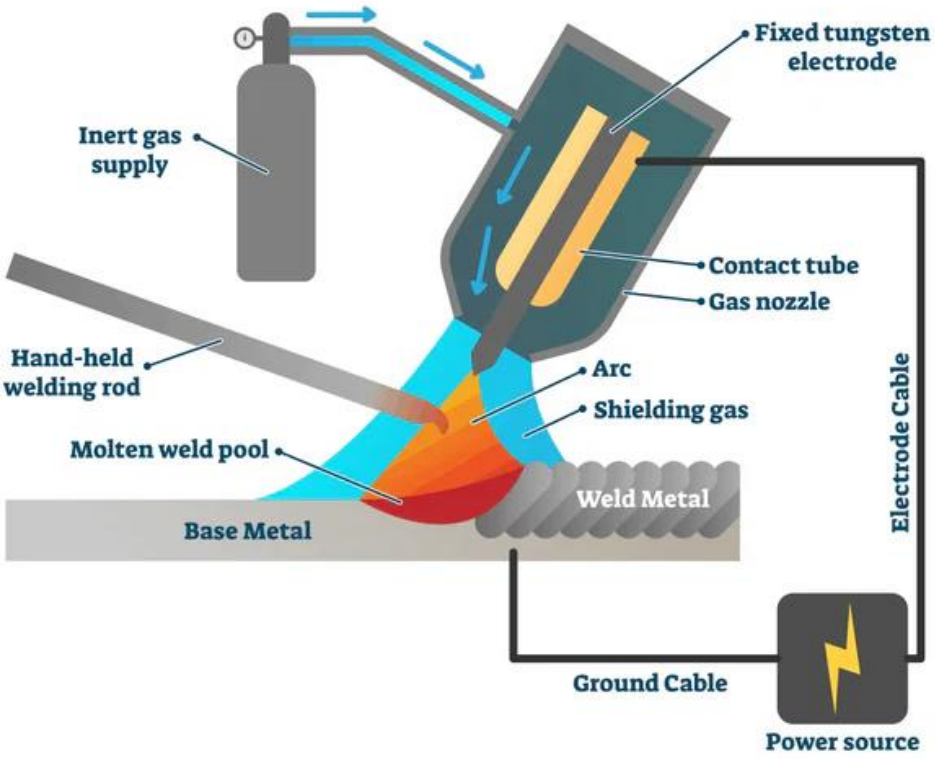
There are several common argon mixes used in welding, each with different compositions tailored for specific welding purposes. Some common argon mixes include:

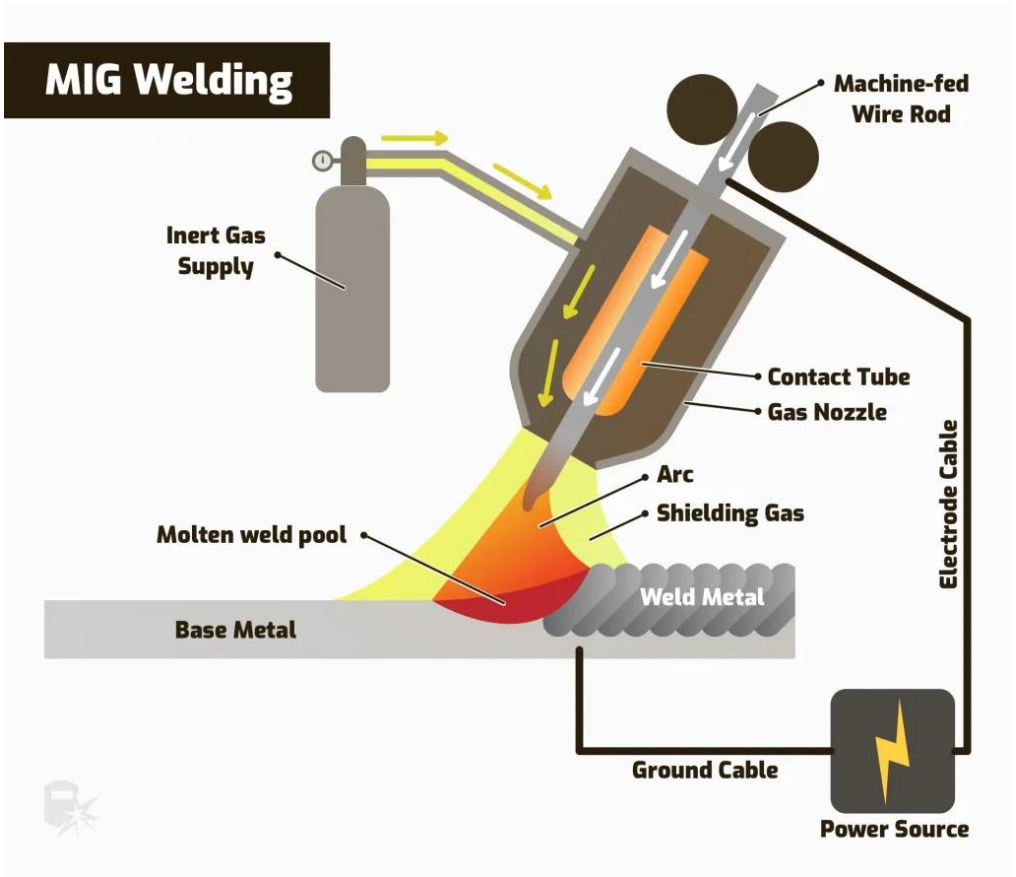
1. Argon-CO2 Mix: This mix is often used for MIG welding of non-ferrous metals and for steel. The most common ratios are 75% argon and 25% CO2, or 90% argon and 10% CO2.

1. Argon-Helium Mix: This mix is used for MIG welding of non-ferrous metals, as the addition of helium can increase heat input and penetration.

These are just a few examples, and the specific mix used will depend on the type of metal being welded and the welding process being employed. It's essential to choose the right mix to ensure high-quality welds.

TIG WELDING


Fixed tungsten electrode
Inert gas supply
Contact tube
Gas nozzle
Hand-held welding rod
Arc
Shielding gas
Molten weld pool
Weld Metal
Base Metal
Electrode Cable
Ground Cable
Power source


MIG Welding
Machine-fed Wire Rod
Inert Gas Supply
Contact Tube
Gas Nozzle
Arc
Shielding Gas
Molten weld pool
Weld Metal
Base Metal
Electrode Cable
Ground Cable
Power Source