Chapter 4 – Gas Metal Arc Welding
Power Source & Peripherals
What makes up the Gas Metal Arc Welding set up?

- Constant Voltage Power Source
- Welding Gun (Torch)
- Wire Feeder
- Contact Tips
- Drive Rolls
- Nozzle
- Shielding Gas
- Work Clamp & Cord
- Regulator/Flow Meter
- Power Cord
- Coolant Circulator (when using water cooled gun)
Wire Feeder & Power Source

- DCCV (direct current constant voltage) power source.
- The power source controls the voltage output.
Is there a difference in drive rolls?
V-Groove

V-Groove drive rolls are generally used for steel and stainless steel electrode wires.
U-Groove drive rolls are generally used for aluminum electrode wires.
What options are available for welding torches (welding guns)?
Considerations for welding torches include:

- Duty cycle and welding range.
- Replacement parts.
How is a gas regulator or flow meter selected?

- Considerations for regulators include:
  - Degree of precision control of gas flow.
  - Display of gas flow actual or preset.
  - Capable of being used with different gas mixes.
Single Stage Flow Gauge

• Single stage flow gas gauges, gas flow is adjusted by turning a T-handle on the front of regulator body.
Single Stage Flow Meter

- Gas flow is adjusted by a thumb screw at the top of float tube. Flow meter regulators provide efficient and accurate gas regulation.
Which power source is best for home or business?

115 volt GMAW

230 volt GMAW

Power Sources