# How to Choose a Welder

## 1. What is your skill level?
- **Low**
  - *No gas required* (Indoor welding recommended)
- **Moderate**
  - *Steel, stainless steel* (Common for general fabrication)
- **High**
  - *Steel, stainless steel, aluminum* (Spee gun required)

## 2. Will you need shielding gas?
- **Low**
  - *No gas required*
- **Moderate**
  - *Steel, stainless steel* (Common for general fabrication)
- **High**
  - *Steel, stainless steel, aluminum* (Spee gun required)

## 3. What type of material will you be welding?
- **Low**
  - *18 gauge to 5/16"*
  - General fabrication
- **Moderate**
  - *22 gauge to 3/8"*
  - Automotive body, structural steel
- **High**
  - *10 gauge to 1/2"*
  - Pipe and tubing, pressure vessels

## 4. What is your material thickness?
- **Low**
  - *18 gauge to 5/16"*
  - Sheet metal, tubing
- **Moderate**
  - *22 gauge to 3/8"*
  - Automotive body, structural steel
- **High**
  - *10 gauge to 1/2"*
  - Pipe and tubing, pressure vessels

## 5. Typical applications
- **Low**
  - *Galvanized steel, pipe and tubing, maintenance & repair*
- **Moderate**
  - *Sheet metal, tubing, automotive body, structural steel*
- **High**
  - *Pipe and tubing, pressure vessels, structural steel, maintenance & repair*

## 6. How clean do you need your weld?
- **Low**
  - *More spatter*
- **Moderate**
  - *Clean / minimal spatter*
- **High**
  - *Extremely clean*

## Welding Process Selection
- **Flux-Cored / FCAW**
  - Ideal for outdoor or windy conditions
  - Good out of position welding capabilities
  - High deposition rates achievable
- **MIG / GMAW**
  - Fast production (high welding speeds)
  - Easier to learn
  - Clean welds with no slag
  - Better control on thin materials
- **Stick / SMAW**
  - Ideal for outdoor or windy conditions
  - Forging on rusty or dirty steels
  - Deep penetration
  - Good choice for thicker materials
- **TIG / GTAW**
  - Highest quality welds
  - Extremely aesthetic weld appearance
  - Can be used on a variety of materials
  - Precise control

## Duty Cycle
- **Duty Cycle Example**
  - 105A @ 30% Duty Cycle
  - 3 Min on / 7 Min off

## Important!
- Identify your input voltage: Do you have 120 volt or 240 volt?