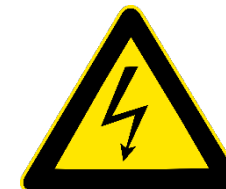




Circuit Protection (Breaker/Disconnect)



Circuit Protection & Welder On/Off Switch: Resistance welders, relative to other industrial equipment, require a tremendous amount of electricity (for extremely short periods of time). It is common to require 480V and 400-Amps of incoming power. This power, if handled improperly, is fatal. There is no traditional “On/Off” switch besides the breaker/disconnect on a spot welder.



The three primary purposes of a circuit protection mounted on a machine then are:

1. To have a way to turn all the incoming power off locally, at the machine
2. To have a safety circuit that will automatically shut off the machine if something is wrong
3. To force a maintenance person to turn the power off before servicing the equipment***

There are two different styles of circuit protection. (We can install either).

- Fused Disconnect (shown to the left here)
- Magnetic Circuit Breaker (shown to the right, built into a weld control)

A Magnetic Circuit Breaker, if the line voltage exceeds it’s rating and settings, then it will trip. To reset, simply throw the switch back to the “ON” position (after ensuring all potential problems have been remedied).

A Fused Disconnect uses replaceable fuses instead of a switch. It still has a handle (switch) that allows them to be turned on and off.

Some manufacturing facilities prefer to use their own breaker/disconnect and do not want this feature. A fused disconnect is initially less expensive, but replacement fuses can cost hundreds of dollars. Fused Disconnects are typically much larger than Magnetic Breakers.

Magnetic Circuit Breakers that are mounted inside the weld control have a mechanical lock-out that shut off the breaker when opening the cabinet door. OSHA has been known to require this feature in some districts as it provides the maximum level of safety.

***NOTE: This feature is only available with a Magnetic Circuit Breaker that is *built into the weld control*, from the factory.

