



## Spot Welder Current Draw Calculations

### Single Phase A.C Type Calculation

$$\left( \frac{KVA}{\text{Primary Voltage} \times 1.41} \right) \times 1000 = \text{Max Current Draw (amps)}$$

Single Phase A.C Type Calculation:

KVA = **100 KVA**

Primary Voltage = **415 V**

$$\left( \frac{100 \text{ KVA}}{415 \text{ V} \times 1.41} \right) \times 1000 = 170 \text{ amps}$$

Max Current Draw = **170 amps**

### Three Phase Frequency Type Calculation

$$\left( \frac{KVA}{\text{Primary Voltage} \times 1.41} \right) \times 0.81 \times 1000 = \text{Max Current Draw (amps)}$$

Three Phase Frequency Example

KVA = **100 KVA**

Primary Voltage = **415V**

$$\left( \frac{100 \text{ KVA}}{415 \text{ V} \times 1.41} \right) \times 0.81 \times 1000 = 138 \text{ amps}$$

Max Current Draw = **138 amps**

### Mid Frequency Inverter D.C Type Calculation

$$\left( \frac{KVA}{\text{Transformer Input Voltage} \times 1.41} \right) \times 0.81 \times 1000 = \text{Max Service Required (amps)}$$

Mid Frequency Inverter Example

KVA = **100 KVA**

Transformer Input Voltage = **650 volts**

$$\left( \frac{100 \text{ KVA}}{650 \text{ V}} \right) \times 0.81 \times 1000 = 88 \text{ amps}$$

Max Service Required = **88 amps**

Note: This is an approximate calculation only there are other factors should be considered please check with your electrical engineers & switch gear suppliers for conformation.