iQ Series
ULTRASONIC WELDING SYSTEM

AC Line Requirements for Dukane Ultrasonic Welders
AC Power Requirements

The AC power requirements for the Dukane iQ generators is determined by the power rating of the generator and the version of the servo controller. In most cases, the requirements will be as follows:

<table>
<thead>
<tr>
<th>Generator Power Rating</th>
<th>AC Line Voltage/Current (nominal)</th>
<th>Recommended Circuit Breaker Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>600 to 1200 Watts</td>
<td>100-120V 50/60 Hz @ 15 Amps</td>
<td>15 Amps</td>
</tr>
<tr>
<td>600 to 1200 Watts</td>
<td>200-240V 50/60 Hz @ 8 Amps</td>
<td>15 Amps</td>
</tr>
<tr>
<td>1800 to 2400 Watts</td>
<td>200-240V 50/60 Hz @ 15 Amps</td>
<td>15 Amps</td>
</tr>
<tr>
<td>2600 Watts (PFC)*</td>
<td>200-240V 50/60 Hz @ 15 Amps</td>
<td>15 Amps</td>
</tr>
<tr>
<td>3600 to 4800 Watts</td>
<td>200-240V 50/60 Hz @ 30 Amps</td>
<td>30 Amps</td>
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</tbody>
</table>

*PFC: The AIM series generators are Power Factor Corrected, which is significantly more efficient.

Grounding

Proper grounding is required both for safety and effective suppression of electrical noise. Each generator, thruster, and servo controller are equipped with a grounding stud. For correct operation, a single connection should be made from each stud, directly to earth ground in a STAR configuration as illustrated below. DO NOT daisy chain ground connections.

Approved 2 pole, 3 wire grounding receptacle HUBBELL No. 5652 or equivalent to NEMA 6-15R or 6-20R

Approved 2 pole, 3 wire grounding receptacle BRYANT No. 5621 or equivalent to NEMA 5-15R or 5-20R
Wiring from a Single Phase

Single phase connection should be wired as shown. This applies to 120 Volt or 220 Volt. (as common in European Union)

Wiring from 2 Phases

2 Phase 220 Volt connections should be wired as shown below. This typically applies to a 200-240 AC line as is commonly found in the US. (120 Volt connection also shown)
Wiring from a 3 Phase Circuit (WYE)
3 Phase 208 Volt connections should be wired as shown below. (120 Volt outlet also shown)

Wiring from a 3 Phase Circuit (Delta)
3 Phase 240 Volt connections should be wired as shown below. (120 Volt outlet also shown)
Wiring from a 3 Phase Circuit (WYE)
3 Phase 380/480 Volt connections should be wired as shown below.

Wiring from a 3 Phase Circuit (Delta)
3 Phase 380/480 Volt connections should be wired as shown below.