

## Gunnar 4001 Electrical Setup

### **Parts:**

The Gunnar 4001 uses a 220V five wire system, three phases with a neutral and ground wire, 50 / 60 Hz, with a 30 Ampere three pole breaker.

Please make sure the electrician doing the wiring is licensed for 220v commercial wiring.

The proper connector(s) are NEMA L21-30P – 4 pole, 5 wire, grounding, locking plug.  
With a NEMA L21-30R – 4 pole, 5 wire, grounding, locking receptacle.



To help source the connectors a few links are provided below.

[http://www.leviton.com/OA\\_HTML/ibeCCtpItdspRte.jsp?item=3435&section=10873](http://www.leviton.com/OA_HTML/ibeCCtpItdspRte.jsp?item=3435&section=10873)

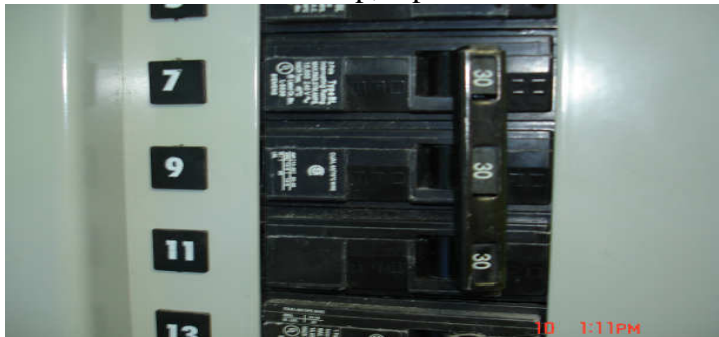
[http://www.leviton.com/OA\\_HTML/ibeCCtpItdspRte.jsp?item=3436&section=10871](http://www.leviton.com/OA_HTML/ibeCCtpItdspRte.jsp?item=3436&section=10871)

[http://www.leviton.com/OA\\_HTML/ibeCCtpItdspRte.jsp?item=88471&section=10878](http://www.leviton.com/OA_HTML/ibeCCtpItdspRte.jsp?item=88471&section=10878)

<http://www.marinco.com/product/30-amp3-phase-y120208-volt-connector>

<http://www.hubbellonline.com/wiring/bryant/pdf/h/h46.pdf>

You will also need a 30 amp, 3 phase circuit breaker for your electrical panel.



## Installing the 220v, 5 wire, 30 Amp source:

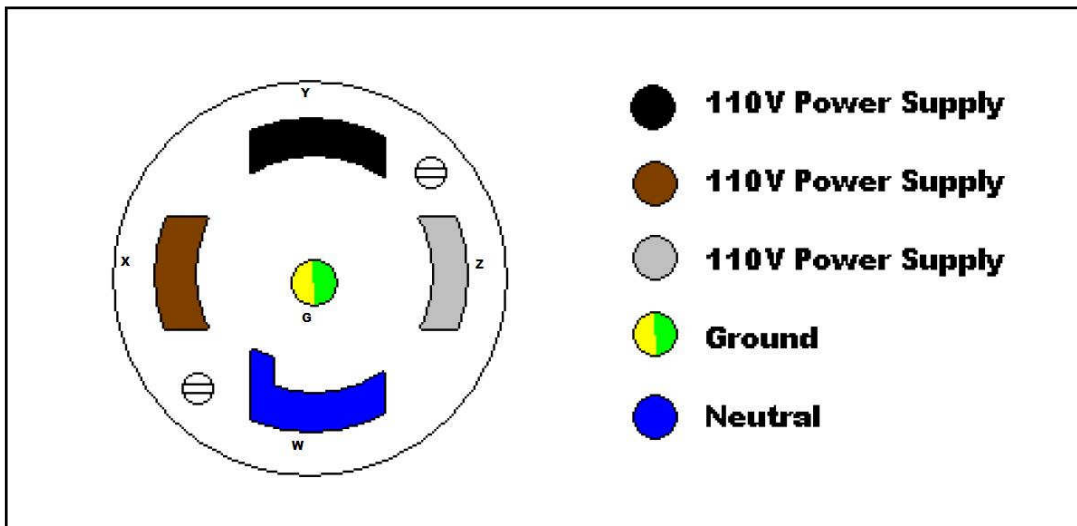
The Color coding for the Gunnar wiring is:

Phase X	Brown
Phase Y	Gray
Phase Z	Black
Neutral	Blue
Ground	Yellow/Green

- Note: it is VERY important that the **BLUE** is connected to the NEUTRAL.
- The Gunnar mat cutter uses a European wiring standard where **blue** is neutral.
- The US wiring standard has white specified as the neutral. Please make sure you understand that for the Gunnar mat cutter **BLUE** is the neutral wire.

## Checking a 3-Phase Electrical Connection

The diagram below shows the colour of the wires of the 3-phase connection, their function in the system and their location on the 3-phase plug.

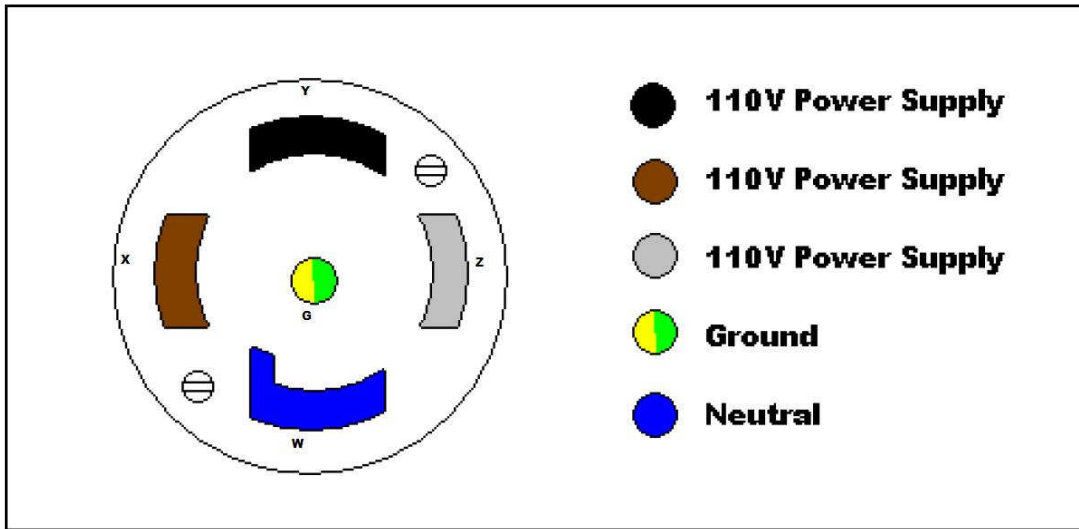


Before connecting the mat cutter check the voltages on the plug or receptacle with a voltage meter. It should read as follows:

X Phase	-	Ground	= 110V
Y Phase	-	Ground	= 110V
Z Phase	-	Ground	= 110V
X Phase	-	Neutral	= 110V
Y Phase	-	Neutral	= 110V
Z Phase	-	Neutral	= 110V
X Phase	-	Y Phase	= 220V
X Phase	-	Z Phase	= 220V
Z Phase	-	Y Phase	= 220V

### Attaching the L21-30P – 4 pole, 5 wire, grounding, locking plug:

Once you have confirmed that the receptacle is wired correctly and that the neutral is wired correctly attach the L21-30P plug to the power cord on the Gunnar 4001.



The Color coding for the Gunnar wiring is:

Phase X	Brown
Phase Y	Gray
Phase Z	Black
Neutral	Blue
Ground	Yellow/Green

- Note: it is VERY important that the **BLUE** is connected to the NEUTRAL.
- The Gunnar mat cutter uses a European wiring standard where **blue** is neutral.
- The US wiring standard has white specified as the neutral. Please make sure you understand that for the Gunnar mat cutter **BLUE** is the neutral wire.

We have repeated the wiring information because it is very important that the neutral and ground are wired correctly.

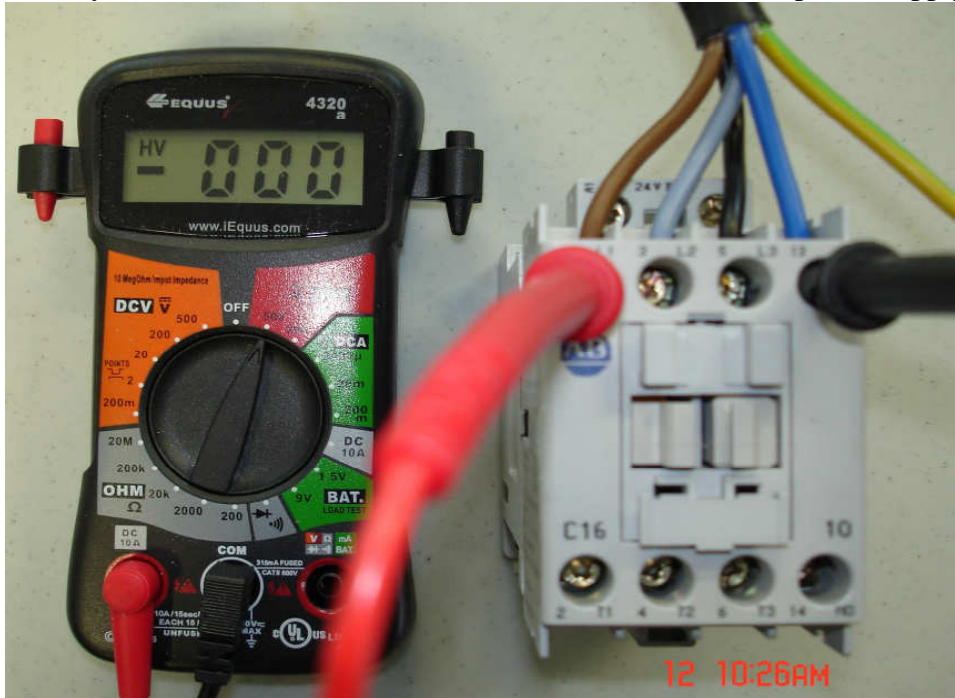
Once you have verified the power source is wired correctly the Gunnar service technician will check the power to the mat cutter before the initial start up.

### Checking the power at the Gunnar 4001:

Before plugging in the machine, make sure the power switch on the machine is off by pushing down on the **RED** stop button.

If the power is off you may plug the machine in.

Follow the power supply cable inside the machine to where it connects into an Allen-Bradley Switch 100-C16D\*10. You will need to measure the power supply here as well.



On the Gunnar 4001 the power cable is wired to L1, L2, L3, Neutral = N0

Using a voltage meter measure the voltage to the connections on the Allen-Bradley Switch 100-C16D\*10.

It should read as follows:

Gunnar 4001

L1 + Ground = 110V

L2 + Ground = 110V

L3 + Ground = 110V

L1 + Neutral = 110V

L2 + Neutral = 110V

L3 + Neutral = 110V

L1 + L2 = 220V

L1 + L3 = 220V

L2 + L3 = 220V

Once all the voltages have been confirmed you may power on the machine.